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 NEWS 10  Jun 10  MEDLINE Reload
 NEWS 11  Jun 10  PCTFULL has been reloaded
 NEWS 12  Jul 02  FOREGE no longer contains STANDARDS file segment
 NEWS 13  Jul 22  USAN to be reloaded July 28, 2002;
                  saved answer sets no longer valid
 NEWS 14  Jul 29  Enhanced polymer searching in REGISTRY
 NEWS 15  Jul 30  NETFIRST to be removed from STN
 NEWS 16  Aug 08  CANCERLIT reload
 NEWS 17  Aug 08  PHARMAMarketLetter(PHARMAML) - new on STN
 NEWS 18  Aug 08  NTIS has been reloaded and enhanced
 NEWS 19  Aug 19  Aquatic Toxicity Information Retrieval (AQUIRE)
                  now available on STN
 NEWS 20  Aug 19  IFIPAT, IFICDB, and IFIUDB have been reloaded
 NEWS 21  Aug 19  The MEDLINE file segment of TOXCENTER has been reloaded
 NEWS 22  Aug 26  Sequence searching in REGISTRY enhanced
 NEWS 23  Sep 03  JAPIO has been reloaded and enhanced
 NEWS 24  Sep 16  Experimental properties added to the REGISTRY file
 NEWS 25  Sep 16  Indexing added to some pre-1967 records in CA/CAPLUS
 NEWS 26  Sep 16  CA Section Thesaurus available in CAPLUS and CA

 NEWS EXPRESS  February 1 CURRENT WINDOWS VERSION IS V6.0d,
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=> s IgY
L1          1289 IGY

=> s l1 and dietary supplement
L2             1 L1 AND DIETARY SUPPLEMENT

=> d l2 cbib abs

L2   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2002 ACS
1999:428608   Document No. 131:144051  Effect of various hen feed supplements
      on IgY level in eggs and laying rates.  Lee, N. H.; Rho, J. H.;
      Han, C. K.; Sung, K. S. (Korea Food Res. Institute, Kyunggi-Do, 463-600,
      S. Korea).  Han'guk Ch'uksan Hakhoechi, 41(2), 155-166 (Korean) 1999.
      CODEN: HGCHAG.  ISSN: 0367-5807.  Publisher: Korean Society of Animal
      Sciences.
AB    Breeding tests were performed to obtain high IgY eggs from hens
      fed 5 diets (supplemented with 4% garlic powder, 2% or 4% kelp meal, 2%
      sea tangle powder, Se 0.5 ppm + vitamin E at 300% of requirement) for 8-10
      wk.  The supplements decreased egg laying rates.  The 4% kelp meal group
      had much higher IgY values than the other groups.  In the last
      week only the 4% kelp meal group and 2% sea tangle group had higher values
      than controls.  The av. IgY values in the 4% kelp group were 10%
      higher than in controls and the levels increased with extending the
      feeding period.  To increase the total IgY content, another test
      was performed with 3 supplements (2% ginger, 0.5% cinnamon, 2% mint).
      High IgY levels were found in the cinnamon and mint groups with
      no decrease in the laying rates.


=> s l1 and animal feed
L3             4 L1 AND ANIMAL FEED

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PROCESSING COMPLETED FOR L3
L4             4 DUP REMOVE L3 (0 DUPLICATES REMOVED)
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=> d l4 1-4 cbib abs

L4 ANSWER 1 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
2001:196910 Document No.: PREV200100196910. Dietary polyunsaturated fatty acids significantly affect laying hen lymphocyte proliferation and immunoglobulin G concentration in serum and egg yolk. Wang, Y. W.; Cherian, G.; Sunwoo, H. H.; Sim, J. S. (1). (1) Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, T6G 2P5: jsim@afns.ualberta.ca Canada. Canadian Journal of Animal Science, (December, 2000) Vol. 80, No. 4, pp. 597-604. print. ISSN: 0008-3984. Language: English. Summary Language: English; French.

AB Forty eight (48) Single Comb White Leghorn laying hens 24 wk of age were housed in cages and were fed wheat-soybean meal based diets with added oils (sunflower oil (SO), animal oil (AO), linseed oil (LO), or fish oil (FO)) at 5%. After 5 wk on experimental diets, spleen lymphocytes and peripheral blood lymphocytes were obtained from six birds and assayed for polyclonal mitogen Con A-induced proliferative response and the proportions of lymphocyte subsets. The IgG concentration in serum and egg yolk was also measured. Feeding LO and FO resulted in an increase in longer-chain n-3 polyunsaturated fatty acids (PUFA) (C20:5n-3, C22:5n-3, and C22:6n-3) with a concurrent decrease of C20: 4n-6 in spleen lymphocytes ($P < 0.05$). The highest enrichments of the longer-chain n-3 PUFA were achieved by feeding FO. The content of C20: 4n-6 was higher ($P < 0.05$) in the lymphocytes of hens fed AO and SO. Subsequently, Con A-stimulated proliferation of spleen and peripheral blood lymphocytes were significantly suppressed ($P < 0.05$) in the chicks fed high n-3 PUFA diets (LO and FO). The LO diet increased ($P < 0.05$) the IgG concentration in laying hen serum. The SO diet reduced ($P < 0.05$) **IgY** content in egg yolk. Dietary fatty acids did not affect ($P > 0.05$) the proportions of lymphocyte subsets in spleen and blood lymphocytes. It is indicated that the ratio of n-6 to n-3 PUFA plays a major role in modulating cell-mediated and humoral immune responses of laying hens, and various n-3 fatty acids possess different potencies of immunomodulation.

L4 ANSWER 2 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
1999:476055 Document No.: PREV199900476055. Studies on the systemic availability of maternal and endogeneously produced immunoglobulin G1 and G2 in newborn calves by using newly developed ELISA systems. Erhard, M. H. (1); Amon, P.; Nueske, S.; Stangassinger, M.. (1) Institut fuer Tierphysiologie, Veterinaestr. 13, D-80539, Muenchen Germany. Journal of Animal Physiology and Animal Nutrition, (Aug., 1999) Vol. 81, No. 4-5, pp. 239-248. ISSN: 0931-2439. Language: English. Summary Language: English; German.

AB The time course of serum concentrations of the bovine IgG1 and IgG2 was monitored in 18 newborn colostrum-fed calves from birth to 11 weeks of age. All calves received three 1.5l meals of a pooled colostrum with IgG1 and IgG2 concentrations of 54.9 mg/ml and 4.2 mg/ml during the first 14 h postnatum. The mean IgG concentrations in calf serum increased from 0.15 mg IgG1/ml and 0.06 mg IgG2/ml (precolostral values) to 9.3 mg IgG1/ml and 0.8 mg IgG2/ml 12 h after the third colostrum meal. Thereafter, IgG1 decreased continuously to a minimum level of 4.9 mg/ml ($p < 0.05$) at day 28 post-natum and increased to 9.0 mg/ml at day 77. Postcolostral mean IgG2 was lowest (0.5 mg/ml) at day 11 and highest (1.2 mg/ml) at day 77. With these postcolostral IgG concentrations the respective body weight-corrected serum IgG pools approximately were calculated. According to that procedure the initially high IgG pool in the serum at day 2 corresponds to 11.3 and 8.7%, respectively, of the ingested colostral IgG1 and IgG2. The time course of these IgG pools in the serum could be characterized by four typical phases. After a rapid increase from 0.45 g to 22.6 g (12 h after the last colostrum meal) in phase I, the total serum IgG decreased to 17.6 g at day 11 post-natum (phase II) and levelled-out until day 28 post-natum at a value of 17.3 g (phase III). In phase IV total serum IgG increased to 49.3 g at the end of the observation period

(week 11). Considering these IgG values, which had been standardized by body weight, the endogeneous IgG production seemed to start clearly (at week 1-2 post-natum) before the increase of the IgG concentration in the serum. To measure these IgG1 and IgG2 concentrations in the serum as well as in the colostrum, sandwich ELISA detection systems were developed which specifically quantify these IgG subclasses in cattle. The specific immunoglobulin Y (**IgY**) could be isolated from the egg yolk of laying hens which have been immunized with bovine IgG1 or IgG2 and1.6% (IgG1) and 1.9% (IgG2) of total egg yolk **IgY** were found to be subclass-specific after purification. For the newly developed IgG2-specific sandwich ELISA system the subclass-specific **IgY** antibody was used for coating and peroxidase-marked protein G served as conjugate. Due to cross-reactivity problems monoclonal antibodies were used to develop a further sandwich ELISA for the quantification of IgG1. Both newly developed ELISA detection systems showed sufficiently high reproducibility and sensitivity for routine diagnostic purposes.

L4 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
1998:514641 Document No.: PREV199800514641. Effects of feeding level of full fat flax seed on immune response and fatty acid composition in egg. Chae, Hyun-Seok (1); Ahn, Chong-Nam (1); Paek, Bong-Hyun (1); Kim, Dong-Woon (1); Chung, Wan-Tae (1); Kim, Seok-Chul (1); Sim, Jeong-Seok. (1) Natl. Livestock Res. Inst., RDA, Suwon 441-350 South Korea
. RDA Journal of Livestock Science, (June, 1998) Vol. 40, No. 1, pp. 145-151. ISSN: 1226-5667. Language: Korean. Summary Language: Korean; English.

AB This experiment was conducted to investigate the effects of feeding level of full fat flax on immune response and fatty acid composition in egg from white leghorn. Total 40 laying hens were divided 4 groups. Diets including 0, 3, 6, 9% of fullfat flax seed were fed for 11 weeks. The results obtained were summarized as follows: 1. Linolenic acid (LNA C18:3) in the fatty acid composition was increased as levels of full fat flax seed was increased up 3, 6, 9%. Docosahexaenoic acid (DHA) was similar to LNA reaction. 2. **IgY** concentrations in eggs from chickens immunized with bovine serum albumin (BSA) were not different among treatment groups. 3. Anti-BSA **IgY** titers in eggs from chickens immunized with BSA were increased linearly to 25 apprx 50 days in all groups after injection antigen(BSA), 6% full fat flax seed treatment groups were the highest in all groups. 4. Egg and yolk weight were not different among treatment groups.

L4 ANSWER 4 OF 4 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
1998:514640 Document No.: PREV199800514640. Effects feeding of alpha-tocopherol and selenium in laying hen's lation including full fat flax seed on immune response and storage characteristics in egg. Chae, Hyun-Seok (1); Ahn, Chong-Nam (1); Paek, Bong-Hun (1); Kim, Dong-Woon (1); Chung, Wan-Tae (1); Kim, Seok-Chul (1); Sim, Jeong-Seok. (1) Natl. Livestock Res. Inst., RDA, Suwon-441-350 South Korea
. RDA Journal of Livestock Science, (June, 1998) Vol. 40, No. 1, pp. 138-144. ISSN: 1226-5667. Language: Korean. Summary Language: Korean; English.

AB This experiment was conducted to investigate the effects of full fat flax seed, alpha-tocopherol and selenium on immune response and storage characteristics in egg from white leghorn. Total 50 laying hens were divided 5 groups. C group was fed common diet without any additives for 11 weeks, T1 was fed by diet with 3% full fat flax seed, T2 was fed by diet with 300 mg of alpha-tocopherol/kg and 3% full fat flax seed, T3 was fed by diet with 0.25 mg of selenium/kg and 3% full fat flax seed, T4 was fed by diet with alpha-tocopherol and selenium and 3% full fat flax seed. The results obtained were summarized as follows: 1. Egg and yolk weights were not different about tocopherol and selenium containing 3% full fat flax seed. 2. Immunoglobulin Y (**IgY**) concentrations in egg yolks from chickens immunized with bovine serum albumin (BSA) were not different

among treatment groups. 3. AntiBSA **IgY** titers in eggs from chickens immunized with BSA were increased linearly to 25-50 days in all treatment groups after injection antigen(BSA), in particular T2 treatment group was the highest among all groups. 4. Haugh units during storage (25degreeC, 10 days) were increased highly at T2 and T4 groups. 5. The changing rate of compositions of fatty acid in egg during storage (25degreeC, 10 days) were not different among treatment groups.

=> s l1 and dietary protein wasting
L5 0 L1 AND DIETARY PROTEIN WASTING

=> s l1 and yolk
L6 647 L1 AND YOLK

=> s l6 and albumin
L7 37 L6 AND ALBUMIN

=> s l7 and antigen
L8 21 L7 AND ANTIGEN

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PROCESSING COMPLETED FOR L8
L9 14 DUP REMOVE L8 (7 DUPLICATES REMOVED)

=> d l9 1-14 cbib abs

L9 ANSWER 1 OF 14 SCISEARCH COPYRIGHT 2002 ISI (R)
2002:79993 The Genuine Article (R) Number: 510WZ. The avian antibody response . Tizard I (Reprint). Texas A&M Univ, Schubot Exot Bird Hlth Ctr, College Stn, TX 77843 USA (Reprint). SEMINARS IN AVIAN AND EXOTIC PET MEDICINE (JAN 2002) Vol. 11, No. 1, pp. 2-14. Publisher: W B SAUNDERS CO. INDEPENDENCE SQUARE WEST CURTIS CENTER, STE 300, PHILADELPHIA, PA 19106-3399 USA. ISSN: 1055-937X. Pub. country: USA. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*

AB In the 300 million years since the divergence of the avian and mammalian lines, numerous differences have evolved between the antibody responses of birds and mammals. The most significant of these differences results from the use of the bursa of Fabricius by birds. This unique organ serves as a site where B cells, the cells that will eventually produce antibodies, are first selected for their ability to produce antibodies against foreign **antigens**. This selection process is preceded by a relatively short period when the developing B cells generate a wide array of antibody receptor molecules by gene conversion. Thus, unlike mammals that can generate new **antigen**-binding specificities throughout their lives, birds can only do so during a short period within the bursa before hatching. A second key difference lies in the chemical structure of the major immunoglobulin (Ig) involved. Thus in mammals, this is IgG. In birds it is now recognized as a distinctly different immunoglobulin called **IgY**. In addition, some birds can produce a small-version of the **IgY** that lacks a full-sized Fc region. Its biological significance is unclear. Finally, birds lay eggs and thus must pass maternal immunoglobulins on to their offspring within the egg contents. For this reason, the egg **yolk** is full of **IgY** , whereas the **albumin** is rich in IgA. Pigeons are a notable exception to this situation when they secrete a "crop milk" rich in IgA. Notwithstanding these differences, it must be emphasized that the biological role of antibodies is identical in all species tested to free the body of extracellular invaders. For this reason, the basic kinetics and function of the antibody response is well conserved between the different vertebrate classes.

L9 ANSWER 2 OF 14 CAPLUS COPYRIGHT 2002 ACS

2000:351559 Document No. 133:3713 Generation of antibodies using polynucleotide vaccination in avian species. Duan, Lingxun (Genway Biotech, Inc., USA). PCT Int. Appl. WO 2000029444 A1 20000525, 83 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US26843 19991112. PRIORITY: US 1998-PV108487 19981116.

AB The present invention relates to a process for producing antibodies to an **antigen** in an avian species using polynucleotide vaccination. The present invention also relates to a process for detg. the proteomics profile of a set of pre-selected DNA sequences isolated from a bio-sample, preferably the proteomics profile of a human cDNA library. The present invention further relates to a process for identifying physiol. distinguishable markers assocd. with a physiol. abnormal bio-sample.

L9 ANSWER 3 OF 14 MEDLINE DUPLICATE 1

2000464897 Document Number: 20470749. PubMed ID: 11020070. Adjuvant effects of various lipopeptides and interferon-gamma on the humoral immune response of chickens. Erhard M H; Schmidt P; Zinsmeister P; Hofmann A; Munster U; Kaspers B; Wiesmuller K H; Bessler W G; Stangassinger M. (Institut fur Physiologie, Physiologische Chemie und Tierernahrung, Tierarztliche Fakultat, Universitat Munchen, Germany.. erhard@rz.uni-leipzig.de) . POULTRY SCIENCE, (2000 Sep) 79 (9) 1264-70. Journal code: 0401150. ISSN: 0032-5791. Pub. country: United States. Language: English.

AB The adjuvant effects of various lipopeptides and recombinant chicken interferon gamma (IFN-gamma) on the humoral immune response of laying hens was investigated in four immunization studies. We used the lipopeptide Pam3Cys-Ser-(Lys)4 (PCSL), the conjugate P-Th1 consisting of the lipopeptide P3CS and the T-helper epitope Th1 (FISEAIIHVLHSRHPG), and the conjugate P-Th2 of the lipopeptide P3CSS and the T-helper epitope Th2, which corresponds to the peptide EWEFVNTPPLV, as adjuvants. Human serum **albumin** (HSA), recombinant bovine somatotropin (RBST), and human immunoglobulin G (IgG) served as **antigens** in the different experiments. All tested adjuvants enhanced the humoral immune response with various intensities. Chickens showed high antibody titers after the immunization with HSA even without adjuvant, but the adjuvant effects of PCSL and the combination of PCSL and recombinant chicken interferon-gamma (IFN-gamma) were much more pronounced using the **antigens** RBST and IgG. Especially after the third immunization, higher titers of antibodies were induced by the coadministration of P-Th1 and, to a greater extent, by the combination of PCSL and P-Th1 compared with the use of PCSL. Also, chickens that had received PCSL and P-Th2 showed the highest immune response, even after the second booster. The average concentrations of chicken immunoglobulin Y were significantly higher in 5-mo-old chickens (9.4 mg/mL serum and 10.1 mg/mL egg **yolk**) compared with 9-mo-old chickens (5.9 mg/mL serum and 5.1 mg/mL egg **yolk**). The specific serum antibody response was higher in the older chickens than in the younger chickens. Because chicken antibodies are likely to be used increasingly for diagnostic and therapy in the future, lipopeptides and recombinant chicken IFN-gamma may find many applications as adjuvants, thus contributing to the welfare of experimental animals.

L9 ANSWER 4 OF 14 CAPLUS COPYRIGHT 2002 ACS

2001:249015 Document No. 135:136505 Preparation of **antigen** -specific **IgY** for food application. Sunwoo, H. H.; Li, X.; Lee, E. N.; Kim, Y. K.; Sim, J. S. (Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Can.). Egg

Nutrition and Biotechnology, [International Egg Symposium], 2nd, Banff, AB, Canada, Apr. 5-8, 1998, Meeting Date 1998, 311-322. Editor(s): Sim, Jeong S.; Nakai, Shuryo; Guenter, Wilhelm. CABI Publishing: Wallingford, UK. (English) 2000. CODEN: 69BCX3.

AB A review with 29 refs. Serum antibodies of hyperimmunized hens are transferred and accumulated efficiently in the egg **yolk**. Egg **yolk** contains 8-20 mg of Igs (**IgY**)/mL or 136-340 mg/ **yolk**. By immunizing hens with specific **antigens** and collecting **IgY** from egg **yolk**, the **IgY** has been applied extensively for many diagnostic, prophylactic and therapeutic uses. However, there is no quick assay technique available for routine estn. of the specific **IgY** concn. in the freshly laid egg. By using bovine serum **albumin** (BSA; 1 mg/mL) in complete Freund's adjuvant, specific antibodies were incubated in twenty 35-wk-old chickens of both Single Comb White Leghorn (SCWL) and Rhode Island Red (RIR) strains. Chickens were boosted once with the same amt. of BSA in incomplete Freund's adjuvant at 2 wk after the first injection. During the period of the expt., the quant. ELISA showed that the concn. of total **IgY** was 6.89 .+-. 0.45 and 6.69 .+-. 0.36 mg/mL in the egg **yolk** of SCWL and RIR hens, resp. The concn. of specific anti-BSA **IgY** at 54 days of immunization was 894.86 .+-. 62.72 and 746.18 .+-. 66.94 .mu.g/mL in the egg **yolk** of SCWL and RIR hens, resp. The proportion of specific anti-BSA **IgY** in total **IgY** on days 14 and 54 of immunization was 2.7 and 12.1% in SCWL hens and 2.0% and 11.4% in RIR hens, resp. We suggest that the quant. ELISA technique can be a simple and fast method in this study.

L9 ANSWER 5 OF 14 CAPLUS COPYRIGHT 2002 ACS

1999:162312 Document No. 130:181461 Aviary, vitellin antibody directed against substances with pharmacologic effect. Fischer, Mattias; Hlinak, Andreas; Fischer, Lothar; Henklein, Peter (Biologisch-Chemisches Institut Hoppegarten (Mark) G.m.b.H., Germany). Ger. Offen. DE 19737453 A1 19990304, 4 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1997-19737453 19970825.

AB The invention describes aviary vitellin antibodies (egg **yolk** antibody) directed against pharmacol. active substances. The antibodies were obtained through immunization of chickens with drug carrier conjugates - drugs coupled to proteins, esp. BSA or KLH - and processing of the egg **yolk** of the immunized chickens. The antibodies (polyclonal **yolk** antibodies **IgY**) are appropriate for qual. and quant. detection of mentioned **antigens** in animal foods (such as meat, sausage or milk) and/or in other animal anal.-diagnostic materials (urine, feces or serum) based on **antigen**-antibody reactions.

L9 ANSWER 6 OF 14 CAPLUS COPYRIGHT 2002 ACS

2000:22151 Document No. 132:164927 Immunoaffinity purification of specific immunoglobulin from egg **yolk**. Chen, Tian-bao; Li, Long; Xu, Xiao-hua; Zhang, Rong-zhen; Rao, Ping-fan (Institute of Biotechnology, Fuzhou University, Fuzhou, 350002, Peop. Rep. China). Sepu, 17(6), 563-566 (Chinese) 1999. CODEN: SEPUER. ISSN: 1000-8713. Publisher: Kexue Chubanshe.

AB Immunoaffinity column (Sepharose-4B) was made with bovine serum **albumin** (BSA) and used to isolate anti-BSA antibody from egg laid by hens which were immunized with BSA. Polyclonal antibody was eluted under different conditions (pH 5.0-2.8) because of its different affinity against **antigen**. SDS-PAGE and double-immunodiffusion anal. confirmed that antibody isolated from egg **yolk** was electrophoretically pure and specific. According to the sepn. aim in this paper, the final elution buffer was 0.1 mol/L glycine-HCl buffer, pH 2.8. The final antibody yield was higher than 90%. As a new development in chromatog. media, POROS has its max. pressure limit of 21 MPa. It has been widely used because of its high performance, high flow and large

capacity. The sugar residue of the antibody was then oxidized and coupled to the hydrazide activated POROS HY. Pure targeted protein (BSA) was obtained through the POROS HY column. The tendency of specific antibody prodn. was investigated during the immunization period. The amt. of specific antibody has increased obviously after boost immunization.

L9 ANSWER 7 OF 14 MEDLINE DUPLICATE 2
1998180860 Document Number: 98180860. PubMed ID: 9521562. Use of an immunoaffinity column for tetrachlorodibenzo-p-dioxin serum sample cleanup. Shelver W L; Larsen G L; Huwe J K. (U.S. Department of Agriculture, Agriculture Research Service, Fargo, ND 58105-5674, USA.) JOURNAL OF CHROMATOGRAPHY. B, BIOMEDICAL SCIENCES AND APPLICATIONS, (1998 Feb 13) 705 (2) 261-8. Journal code: 9714109. ISSN: 1387-2273. Pub. country: Netherlands. Language: English.

AB Covalently linking 1-amino-3,7,8-trichlorodibenzo-p-dioxin with either keyhole limpet hemocyanin (KLH) or bovine serum **albumin** (BSA) provided **antigens** that generated antibodies in chickens. Competitive ELISA analysis demonstrated that the antibodies isolated from egg **yolk** (**IgY**) bound with 1,3,7,8-tetrachlorodibenzo-p-dioxin (1,3,7,8-TCDD). The antibodies were linked to CNBr-Sepharose to generate an immunoaffinity column. Radiolabeled 1,3,7,8-TCDD in a 0.05% Tween 20 solution was retained by the column and could be eluted by increasing the Tween 20 concentration. The binding efficiency for 10.7 ng per ml gel matrix ranged from 85 to 97%. Immunoaffinity columns generated by this method did not effectively bind 14C-1,3,7,8-TCDD from serum samples. Diluting the serum 1:20 with 0.05% Tween 20 increased the binding efficiency. Alternately, ethanol-hexane extraction followed by solid phase extraction on a carbon column using a fat removal protocol also provided an appropriate preaffinity column cleanup for serum samples. After this preaffinity column cleanup, spiked serum samples applied to the immunoaffinity column showed binding efficiencies of over 90%.

L9 ANSWER 8 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
1998:514641 Document No.: PREV199800514641. Effects of feeding level of full fat flax seed on immune response and fatty acid composition in egg. Chae, Hyun-Seok (1); Ahn, Chong-Nam (1); Paek, Bong-Hyun (1); Kim, Dong-Woon (1); Chung, Wan-Tae (1); Kim, Seok-Chul (1); Sim, Jeong-Seok. (1) Natl. Livestock Res. Inst., RDA, Suwon 441-350 South Korea . RDA Journal of Livestock Science, (June, 1998) Vol. 40, No. 1, pp. 145-151. ISSN: 1226-5667. Language: Korean. Summary Language: Korean; English.

AB This experiment was conducted to investigate the effects of feeding level of full fat flax on immune response and fatty acid composition in egg from white leghorn. Total 40 laying hens were divided 4 groups. Diets including 0, 3, 6, 9% of fullfat flax seed were fed for 11 weeks. The results obtained were summarized as follows: 1. Linolenic acid (LNA C18:3) in the fatty acid composition was increased as levels of full fat flax seed was increased up 3, 6, 9%. Docosahexaenoic acid (DHA) was similar to LNA reaction. 2. **IgY** concentrations in eggs from chickens immunized with bovine serum **albumin** (BSA) were not different among treatment groups. 3. Anti-BSA **IgY** titers in eggs from chickens immunized with BSA were increased linearly to 25 apprx 50 days in all groups after injection **antigen**(BSA), 6% full fat flax seed treatment groups were the highest in all groups. 4. Egg and **yolk** weight were not different among treatment groups.

L9 ANSWER 9 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
1998:514640 Document No.: PREV199800514640. Effects feeding of alpha-tocopherol and selenium in laying hen's lation including full fat flax seed on immune response and storage characteristics in egg. Chae, Hyun-Seok (1); Ahn, Chong-Nam (1); Paek, Bong-Hun (1); Kim, Dong-Woon (1); Chung, Wan-Tae (1); Kim, Seok-Chul (1); Sim, Jeong-Seok. (1) Natl. Livestock Res. Inst., RDA, Suwon-441-350 South Korea

. RDA Journal of Livestock Science, (June, 1998) Vol. 40, No. 1, pp. 138-144. ISSN: 1226-5667. Language: Korean. Summary Language: Korean; English.

AB This experiment was conducted to investigate the effects of full fat flax seed, alpha-tocopherol and selenium on immune response and storage characteristics in egg from white leghorn. Total 50 laying hens were divided 5 groups. C group was fed common diet without any additives for 11 weeks, T1 was fed by diet with 3% full fat flax seed, T2 was fed by diet with 300 mg of alpha-tocopherol/kg and 3% full fat flax seed, T3 was fed by diet with 0.25 mg of selenium/kg and 3% full fat flax seed, T4 was fed by diet with alpha-tocopherol and selenium and 3% full fat flax seed. The results obtained were summarized as follows: 1. Egg and **yolk** weights were not different about tocopherol and selenium containing 3% full fat flax seed. 2. Immunoglobulin Y (**IgY**) concentrations in egg **yolks** from chickens immunized with bovine serum **albumin** (BSA) were not different among treatment groups. 3. AntiBSA **IgY** titers in eggs from chickens immunized with BSA were increased linearly to 25-50 days in all treatment groups after injection **antigen**(BSA), in particular T2 treatment group was the highest among all groups. 4. Haugh units during storage (25degreeC, 10 days) were increased highly at T2 and T4 groups. 5. The changing rate of compositions of fatty acid in egg during storage (25degreeC, 10 days) were not different among treatment groups.

L9 ANSWER 10 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3

1998:296226 Document No.: PREV199800296226. Removal of bovine serum **albumin** from cow's milk using chicken egg-**yolk** antibodies immobilized on chitosan gel. Losso, Jack N. (1); Vanderstoep, John; Nakai, Shuryo. (1) Dep. Food Sci., Univ. British Columbia, 6650 NW Marine Drive, Vancouver, BC V6T 1Z4 Canada. Food and Agricultural Immunology, (March, 1998) Vol. 10, No. 1, pp. 47-56. ISSN: 0954-0105. Language: English.

AB Polyclonal chicken antibodies raised against bovine serum **albumin** (BSA) were immobilized on chitosan gel for the immunoaffinity isolation of BSA from cow's milk. Antibodies (**IgY**) against BSA were isolated from egg-**yolk**, purified and antibody reactivity to **antigen** was measured. **IgY** developed against BSA was reduced by 2-mercaptoethylamine. The reactivities of reduced and whole **IgY** against BSA were not significantly different. The reduced **IgY** was covalently linked to chitosan gel through stable covalent thioether linkages using sulfo-succinimidyl-4-(N-maleimidomethyl)cyclohexane-1-carboxylate (sulfo-SMCC) as a cross-linker. The density of antibody **IgY** immobilized on chitosan gel was approximately 3-5 mg per ml of chitosan gel. The ligand-binding capacity of immobilized **IgY** towards BSA was 0.35-0.44 mg BSA per ml of chitosan gel. A single pass of skimmed milk through the column allowed the removal of BSA from the milk sample. The milk sample was analyzed, before and after immunoaffinity separation, by SDS-PAGE. BSA was desorbed with 0.5 M-glycine-HCl buffer at pH 2.8 but the reusability of the column was limited to three cycles. Alternatively, BSA was desorbed with 0.5 M-glycine-HCl buffer containing 2 M-NaCl at pH 4.6 after longer incubation times at a slower flow rate. The low ligand-binding capacity was not an impediment to reuse of the column. The column was reused more than 20 times with minimal loss of binding capacity.

L9 ANSWER 11 OF 14 SCISEARCH COPYRIGHT 2002 ISI (R)

1998:400164 The Genuine Article (R) Number: ZP176. Antibody response in laying hens with small amounts of **antigen**. Larsson A (Reprint); Carlander D; Wilhelmsson M. UNIV UPPSALA HOSP, DEPT CLIN CHEM, S-75185 UPPSALA, SWEDEN (Reprint); SWEDISH UNIV AGR SCI, DEPT ANIM BREEDING & GENET, S-75007 UPPSALA, SWEDEN. FOOD AND AGRICULTURAL IMMUNOLOGY (MAR 1998) Vol. 10, No. 1, pp. 29-36. Publisher: CARFAX PUBL CO. PO BOX 25,

ABINGDON OX14 3UE, OXFORDSHIRE, ENGLAND. ISSN: 0954-0105. Pub. country: SWEDEN. Language: English.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Chicken antibodies offer many advantages over the traditional mammalian ones. A laying hen produces large amounts of **yolk** antibodies and the use of **yolk** antibodies eliminates the painful procedure of collecting blood from the animal. Thus, the use of chicken antibodies will reduce both the number of animals required to produce antibodies and also animal distress. Chicken antibodies also have several biochemical advantages compared to mammalian antibodies: they often increase the signal and reduce interference in many assays. However, the species chosen for antibody production have usually been mammals. This is probably due to tradition, but also to limited knowledge about the production of chicken antibodies. We studied the immune response in the chicken using small amounts of mammalian **antigen**, and show that a good immune response can be obtained with 0.1-1.0 mu g of bovine serum **albumin**
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L9 ANSWER 12 OF 14 MEDLINE

95071630 Document Number: 95071630. PubMed ID: 7980875. Immunorecognition of ring skeleton of taxanes by chicken egg **yolk** antibodies.
Concetti A; Ripani E; Barboni L; Torregiani E; Bombardelli E; Gariboldi P; Venanzi F M. (Dipartimento di Biologia M.C.A., Camerino MC, Italy.)
BIOLOGICAL CHEMISTRY HOPPE-SEYLER, (1994 Jun) 375 (6) 419-23. Journal code: 8503054. ISSN: 0177-3593. Pub. country: GERMANY: Germany, Federal Republic of. Language: English.

AB Anti-10 deacetylbaccatin III (DAB) antibodies (**IgY**) were elicited in hens immunized with a succinyl-DAB/BSA conjugate and extracted from egg **yolk**. As shown by indirect competitive inhibition enzyme immunoassay (CIEIA), the addition of free-DAB competitively inhibited the binding of affinity purified anti-DAB **IgY** to DAB/BSA solid phase conjugated **antigen**. The assay enabled the detection of DAB in concentrations as low as 7.5ng/ml (13.7 nM DAB), whereas anti-DAB **IgY** did not react with taxol even at a concentration a thousand times higher. The structural requirements of the diterpenoid nucleus for binding to **IgY** were considered on the basis of the levels of cross-reaction found with 10 authentic taxanes. The results indicate that anti-DAB **IgY** represents the first high affinity antibody produced capable of recognizing the ring skeleton of taxol precursors.

L9 ANSWER 13 OF 14 SCISEARCH COPYRIGHT 2002 ISI (R)

93:648190 The Genuine Article (R) Number: MC621. DEVELOPMENT OF A QUANTITATIVE AND SENSITIVE ENZYME-LINKED-IMMUNOSORBENT-ASSAY FOR OCHRATOXIN-A USING ANTIBODIES FROM THE **YOLK** OF THE LAYING HEN.
CLARKE J R; MARQUARDT R R (Reprint); OOSTERVELD A; FROHLICH A A; MADRID F J; DAWOOD M. UNIV MANITOBA, FAC AGR & FOOD SCI, DEPT FOODS & NUTR, WINNIPEG R3T 2N2, MANITOBA, CANADA; UNIV MANITOBA, FAC AGR & FOOD SCI, DEPT FOOD SCI, WINNIPEG R3T 2N2, MANITOBA, CANADA; CADHAM PROV LAB, WINNIPEG, MB, CANADA; UNIV MANITOBA, FAC AGR & FOOD SCI, DEPT ANIM SCI, WINNIPEG R3T 2N2, MANITOBA, CANADA. JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY (OCT 1993) Vol. 41, No. 10, pp. 1784-1789. ISSN: 0021-8561. Pub. country: CANADA. Language: ENGLISH.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Antibodies directed against ochratoxin A (OA) were obtained from hen egg **yolk** using an optimized purification procedure and applied in an enzyme-linked immunosorbent assay (ELISA) for OA in swine finisher diets. The egg **yolk** antibody could be recovered at levels as high as 70-80% with purities greater than 86-92% using a mixture of aqueous buffer and chloroform for lipid extraction and poly(ethylene glycol) for antibody precipitation. Ochratoxins C, B, and alpha and the structurally related mycotoxin citrinin were found to cross-react with the antibody 400, 100, 33.3, and 2%, respectively, in an indirect competitive

ELISA. Ochratoxin A could be detected in swine finisher diets at levels greater than 50 ppb using a simplified sample preparation procedure and a indirect competitive ELISA. Recoveries of OA from the diets were validated by conventional HPLC analysis using a proven sample extraction protocol. ELISA-determined OA values correlated highly with those obtained using HPLC analysis (r = 0.98). Assay sensitivity was found to be dependent on background absorbance. The mixed anhydride (MA) coupling chemistry used to prepare the immunogens promoted high background absorbances in the quantitative ELISA. The background was overcome by using N-hydroxysuccinimide activated ester coupling chemistry for the preparation of plate coating **antigen** and or incubation of the antibody with bovine serum **albumin** that had been subjected to the MA reaction. This study demonstrates that antibodies from hen egg **yolk** can be readily obtained in good yield and purity and used to develop a highly sensitive ELISA for OA.

L9 ANSWER 14 OF 14 SCISEARCH COPYRIGHT 2002 ISI (R)

92:529948 The Genuine Article (R) Number: JL777. EVALUATION OF SUBCUTANEOUS CHAMBERS AS AN ALTERNATIVE TO CONVENTIONAL METHODS OF ANTIBODY-PRODUCTION IN CHICKENS. ERMELING B L (Reprint); STEFFEN E K; FISH R E; HOOK R R. UNIV MISSOURI, COLUMBIA, MO, 65201 (Reprint). LABORATORY ANIMAL SCIENCE (AUG 1992) Vol. 42, No. 4, pp. 402-407. ISSN: 0023-6764. Pub. country: USA . Language: ENGLISH.

ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We compared antibody levels among serum, egg **yolk** extract, and granuloma fluid in chickens immunized with bovine serum **albumin** (BSA). One group of hens was immunized by intramuscular and subcutaneous injection of bovine serum **albumin** in complete Freund's adjuvant, followed by two subsequent booster injections in incomplete Freund's adjuvant. Two other groups were surgically implanted with plastic, perforated wiffle balls (subcutaneous chambers). After a 30-day recovery period, one of the groups with subcutaneous chambers was immunized with BSA in sterile water with two subsequent boosts. The other group was injected with only sterile water. Serum samples, eggs, and granuloma fluid were collected biweekly and analyzed to determine specific IgG, total IgG, and total protein. The subcutaneous chambers were well tolerated. Quantitative ELISAs of serum, egg **yolk** extract, and granuloma fluid specimens disclosed that specific antibody levels were present in all specimens by 2 weeks after primary immunization. During the course of the experiment, specific antibody levels of serum and egg **yolk** specimens were significantly higher than those of granuloma fluid ($P < 0.05$). However, an additional injection of **antigen** into the subcutaneous chambers resulted in specific antibody levels in granuloma fluid specimens that were comparable to those of serum and egg **yolk** extract. Use of subcutaneous chambers in chickens may be a viable alternative to routine antibody production methods.

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FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS' ENTERED AT 14:20:00 ON 16 SEP 2002

L1 1289 S IGY
L2 1 S L1 AND DIETARY SUPPLEMENT
L3 4 S L1 AND ANIMAL FEED
L4 4 DUP REMOVE L3 (0 DUPLICATES REMOVED)
L5 0 S L1 AND DIETARY PROTEIN WASTING
L6 647 S L1 AND YOLK
L7 37 S L6 AND ALBUMIN
L8 21 S L7 AND ANTIGEN
L9 14 DUP REMOVE L8 (7 DUPLICATES REMOVED)

=> dup remove l7
PROCESSING COMPLETED FOR L7
L10 24 DUP REMOVE L7 (13 DUPLICATES REMOVED)

=> d l10 1-24 cbib abs

L10 ANSWER 1 OF 24 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
2002:478938 Document No.: PREV200200478938. Detection of Brazil nut proteins in foods by enzyme immunoassay. Blais, Burton W. (1); Omar, Mohamed; Phillippe, Lucille. (1) Laboratory Services Division, Canadian Food Inspection Agency, Bldg. 22, CEF, Ottawa, ON, K1A 0C6: bblais@em.agr.ca Canada. Food and Agricultural Immunology, (June, 2002) Vol. 14, No. 2, pp. 163-168. http://www.tandf.co.uk/journals/tf/09540105.html. print. ISSN: 0954-0105. Language: English.
AB An enzyme immunoassay (EIA) system was developed for the detection of Brazil nut (BN) allergens in foods. The assay utilized a sandwich EIA format with inexpensive chicken egg **yolk** antibodies (**IgY**) as a source of immunoreagents for the immuno-specific capture and detection of BN proteins. The assay was capable of detecting less than 1 ppm of BN proteins spiked into various food matrices, and did not cross-react with protein extracts from a variety of seeds known to contain 2 S **albumins** related to the major BN allergen. This simple and inexpensive assay will enable the food industry and regulatory agencies to ascertain the presence of undeclared BN allergens in foods and related products.

L10 ANSWER 2 OF 24 SCISEARCH COPYRIGHT 2002 ISI (R)
2002:79993 The Genuine Article (R) Number: 510WZ. The avian antibody response . Tizard I (Reprint). Texas A&M Univ, Schubot Exot Bird Hlth Ctr, College Stn, TX 77843 USA (Reprint). SEMINARS IN AVIAN AND EXOTIC PET MEDICINE (JAN 2002) Vol. 11, No. 1, pp. 2-14. Publisher: W B SAUNDERS CO. INDEPENDENCE SQUARE WEST CURTIS CENTER, STE 300, PHILADELPHIA, PA 19106-3399 USA. ISSN: 1055-937X. Pub. country: USA. Language: English. *ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS*
AB In the 300 million years since the divergence of the avian and mammalian lines, numerous differences have evolved between the antibody responses of birds and mammals. The most significant of these differences results from the use of the bursa of Fabricius by birds. This unique organ serves as a site where B cells, the cells that will eventually produce antibodies, are first selected for their ability to produce antibodies against foreign antigens. This selection process is preceded by a relatively short period when the developing B cells generate a wide array of antibody receptor molecules by gene conversion. Thus, unlike mammals that can generate new antigen-binding specificities throughout their lives, birds can only do so during a short period within the bursa before hatching. A second key difference lies in the chemical structure of the major immunoglobulin (Ig) involved. Thus in mammals, this is IgG. In birds it is now recognized as a distinctly different immunoglobulin called **IgY**. In addition, some birds can produce a small-version of the **IgY** that lacks a full-sized Fc region. Its biological significance is unclear. Finally, birds lay eggs and thus must pass maternal immunoglobulins on to their offspring within the egg contents. For this reason, the egg **yolk** is full of **IgY**, whereas the **albumin** is rich in IgA. Pigeons are a notable exception to this situation when they secrete a "crop milk" rich in IgA. Notwithstanding these differences, it must be emphasized that the biological role of antibodies is identical in all species tested to free the body of extracellular invaders. For this reason, the basic kinetics and function of the antibody response is well conserved between the different vertebrate classes.

L10 ANSWER 3 OF 24 MEDLINE DUPLICATE 2
2002305688 Document Number: 22042027. PubMed ID: 12047100. Complement factor B and the alternative pathway of complement activation in bovine milk. Rainard Pascal. (Laboratoire de Pathologie Infectieuse et Immunologie, Institut National de la Recherche Agronomique, Nouzilly, France.. rainard@tours.inra.fr) . JOURNAL OF DAIRY RESEARCH, (2002 Feb) 69 (1) 1-12. Journal code: 2985125R. ISSN: 0022-0299. Pub. country: England: United Kingdom. Language: English.

AB The contribution of the alternative pathway of complement activation to the capacity of normal milk to deposit C3 fragments on bacteria was tested by attempting to block C3 deposition with antibodies to the alternative pathway component factor B (fB). Factor B was purified and antibodies of the **IgY** class, which does not activate mammalian complement, were obtained from the egg **yolk** of immunized laying hens. These antibodies specifically inhibited the deposition of C3. This inhibition and the absence of deposition of C4 demonstrated that C3 deposition in normal milk resulted from the activation of the alternative pathway. Antibodies raised in rabbit were used to develop an ELISA for measuring fB concentrations in milk. The mean concentration of fB was 2.06 microg/ml (+/- 0.18, SEM), 0.57% of the mean value found in serum (360 microg/ml). This proportion was comparable to that of serum **albumin** (0.63% of serum value) but less than the proportion of C3 in milk (2.71%). Nevertheless, fB was apparently not a limiting factor for the functioning of the alternative pathway, since addition of purified fB to normal milk did not improve C3 deposition. In serum, mild heat-treatment (56 degrees C for 3 min or 50 degrees C for 45 min) blocked the alternative pathway and destroyed fB, as shown by loss of antigenicity in ELISA. In milk, mild heat-treatment did not abrogate C3 deposition, and fB was protected, retaining its functionality and antigenicity. Heating at 56 degrees C for at least 45 min was necessary to completely inhibit C3 deposition in normal milk.

L10 ANSWER 4 OF 24 CAPLUS COPYRIGHT 2002 ACS
2000:351559 Document No. 133:3713 Generation of antibodies using polynucleotide vaccination in avian species. Duan, Lingxun (Genway Biotech, Inc., USA). PCT Int. Appl. WO 2000029444 A1 20000525, 83 pp. DESIGNATED STATES: W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG. (English). CODEN: PIXXD2. APPLICATION: WO 1999-US26843 19991112. PRIORITY: US 1998-PV108487 19981116.

AB The present invention relates to a process for producing antibodies to an antigen in an avian species using polynucleotide vaccination. The present invention also relates to a process for detg. the proteomics profile of a set of pre-selected DNA sequences isolated from a bio-sample, preferably the proteomics profile of a human cDNA library. The present invention further relates to a process for identifying physiol. distinguishable markers assocd. with a physiol. abnormal bio-sample.

L10 ANSWER 5 OF 24 MEDLINE DUPLICATE 3
2000464897 Document Number: 20470749. PubMed ID: 11020070. Adjuvant effects of various lipopeptides and interferon-gamma on the humoral immune response of chickens. Erhard M H; Schmidt P; Zinsmeister P; Hofmann A; Munster U; Kaspers B; Wiesmuller K H; Bessler W G; Stangassinger M. (Institut fur Physiologie, Physiologische Chemie und Tierernahrung, Tierarztliche Fakultat, Universitat Munchen, Germany.. erhard@rz.uni-leipzig.de) . POULTRY SCIENCE, (2000 Sep) 79 (9) 1264-70. Journal code: 0401150. ISSN: 0032-5791. Pub. country: United States. Language: English.

AB The adjuvant effects of various lipopeptides and recombinant chicken interferon gamma (IFN-gamma) on the humoral immune response of laying hens was investigated in four immunization studies. We used the lipopeptide Pam3Cys-Ser-(Lys)4 (PCSL), the conjugate P-Th1 consisting of the lipopeptide P3CS and the T-helper epitope Th1 (FISEAIIHVLHSRHPG), and the conjugate P-Th2 of the lipopeptide P3CSS and the T-helper epitope Th2, which corresponds to the peptide EWEFVNTPPLV, as adjuvants. Human serum **albumin** (HSA), recombinant bovine somatotropin (RBST), and human immunoglobulin G (IgG) served as antigens in the different experiments. All tested adjuvants enhanced the humoral immune response with various intensities. Chickens showed high antibody titers after the immunization with HSA even without adjuvant, but the adjuvant effects of PCSL and the combination of PCSL and recombinant chicken interferon-gamma (IFN-gamma) were much more pronounced using the antigens RBST and IgG. Especially after the third immunization, higher titers of antibodies were induced by the coadministration of P-Th1 and, to a greater extent, by the combination of PCSL and P-Th1 compared with the use of PCSL. Also, chickens that had received PCSL and P-Th2 showed the highest immune response, even after the second booster. The average concentrations of chicken immunoglobulin Y were significantly higher in 5-mo-old chickens (9.4 mg/mL serum and 10.1 mg/mL egg **yolk**) compared with 9-mo-old chickens (5.9 mg/mL serum and 5.1 mg/mL egg **yolk**). The specific serum antibody response was higher in the older chickens than in the younger chickens. Because chicken antibodies are likely to be used increasingly for diagnostic and therapy in the future, lipopeptides and recombinant chicken IFN-gamma may find many applications as adjuvants, thus contributing to the welfare of experimental animals.

L10 ANSWER 6 OF 24 MEDLINE DUPLICATE 4
2001070345 Document Number: 20434559. PubMed ID: 10981680. A comparative study between the adsorption of **IgY** and IgG on latex particles. Davalos-Pantoja L; Ortega-Vinuesa J L; Bastos-Gonzalez D; Hidalgo-Alvarez R. (Biological Production Enterprise, Carlos J. Finlay Research Department, Habana, Cuba.) JOURNAL OF BIOMATERIALS SCIENCE, POLYMER EDITION, (2000) 11 (6) 657-73. Journal code: 9007393. ISSN: 0920-5063. Pub. country: Netherlands. Language: English.

AB The use of egg **yolk** antibodies (**IgY**) instead of IgG from mammalian species may present several advantages in the development of routine diagnostic immunoassays. On the one hand, the animal suffering is reduced, as antibodies are obtained directly from the egg. On the other hand, the use of **IgY** avoids the rheumatoid factor interference. The rheumatoid factor interacts with IgG molecules in many immunoassays causing false positive results. Despite these advantages, **IgY** antibodies are scarcely used. As part of an aim to develop a diagnostic test based on **IgY**-latex agglutination, a preliminary study on some characteristics of the **IgY**-latex complexes is carried out. In this work, protein adsorption and desorption, isoelectric point, electrokinetic mobility, and colloidal stability are analysed. Results are compared to those obtained by IgG. Interesting differences are observed (which mainly arise from the difference in molecular structure between **IgY** and IgG), suggesting that **IgY** is a more hydrophobic molecule than IgG. In addition, colloidal dispersions of **IgY** -covered latex particles are more stable (at pH 8) than those sensitized by IgG.

L10 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2002 ACS
2001:249015 Document No. 135:136505 Preparation of antigen-specific **IgY** for food application. Sunwoo, H. H.; Li, X.; Lee, E. N.; Kim, Y. K.; Sim, J. S. (Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, AB, Can.). Egg Nutrition and Biotechnology, [International Egg Symposium], 2nd, Banff, AB, Canada, Apr. 5-8, 1998, Meeting Date 1998, 311-322. Editor(s): Sim, Jeong S.; Nakai, Shuryo; Guenter, Wilhelm. CABI Publishing: Wallingford, UK. (English)

2000. CODEN: 69BCX3.

AB A review with 29 refs. Serum antibodies of hyperimmunized hens are transferred and accumulated efficiently in the egg **yolk**. Egg **yolk** contains 8-20 mg of Igs (**IgY**)/mL or 136-340 mg/ **yolk**. By immunizing hens with specific antigens and collecting **IgY** from egg **yolk**, the **IgY** has been applied extensively for many diagnostic, prophylactic and therapeutic uses. However, there is no quick assay technique available for routine estn. of the specific **IgY** concn. in the freshly laid egg. By using bovine serum **albumin** (BSA; 1 mg/mL) in complete Freund's adjuvant, specific antibodies were incubated in twenty 35-wk-old chickens of both Single Comb White Leghorn (SCWL) and Rhode Island Red (RIR) strains. Chickens were boosted once with the same amt. of BSA in incomplete Freund's adjuvant at 2 wk after the first injection. During the period of the expt., the quant. ELISA showed that the concn. of total **IgY** was 6.89 .+-. 0.45 and 6.69 .+-. 0.36 mg/mL in the egg **yolk** of SCWL and RIR hens, resp. The concn. of specific anti-BSA **IgY** at 54 days of immunization was 894.86 .+-. 62.72 and 746.18 .+-. 66.94 .mu.g/mL in the egg **yolk** of SCWL and RIR hens, resp. The proportion of specific anti-BSA **IgY** in total **IgY** on days 14 and 54 of immunization was 2.7 and 12.1% in SCWL hens and 2.0% and 11.4% in RIR hens, resp. We suggest that the quant. ELISA technique can be a simple and fast method in this study.

L10 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2002 ACS

2000:761084 Document No. 134:324835 Preparation of **IgY** antibodies against human sperm from egg **yolks** of immunized hens. Lu, Nian-Qing; Huang, Yu-Feng; Zhao, Jian-Ran; Xu, Jian-Ping; Lu, Nian-Gui; Zhang, Jian-Wei (Jiangsu Family Planning Reserach Institute, Nanjing, 210029, Peop. Rep. China). Zhonghua Nankexue, 6(2), 111-113 (Chinese) 2000. CODEN: ZNHAAT. Publisher: Zhonghua Nankexue Bianjibu.

AB Objectives: To develop a rapid and economical procedure for prepn. and extn. of antibodies to human sperm from egg **yolks** of immunized hens. Methods: Laying hens, 23 wk old, were regularly administered by i.m. injection with washed human sperm at an one week interval. Immunized eggs were collected after 4 booster injections for isolation of **yolk** Igs. The eggs were pooled, and the extn. procedure was run once a week. The **yolk** was sepd. from the white and carefully washed with Tris-buffered saline (TBS) (1 mmol/L Tris, 14 mmol/L NaCl, pH 7.4) to remove as much of the **albumin** as possible. The **yolk** membrane was cut and the **yolk** poured into a glass beaker and dild. with TBS. For one **yolk** (15 mL), 40 mL of TBS were added. The mixt. was homogenized for ten min with a mixer. Then 40 mL of chloroform were added with continuous stirring. The mixt. was then refrigerated overnight. Supernatant was transferred into a glass beaker and brought to room temp. Half this vol. of satd. ammonium sulfate soln. was added to the supernatant to ppt. Igs. The ppt. was dissolved in a convenient vol. of TBS. The re-crystn. procedure was repeated four times to remove as much of the impure proteins as possible. The final pptn. was dissolved in a minimal vol. of TBS. The ext. was passed through a Sephadex G-25 column to remove sulfate. Barium chloride was used to trace the presence of sulfate in the ext. Results: The presence of anti-human sperm antibodies in the exts. was confirmed by sperm agglutination test. The control test with non-immunized chicken **IgY** and chicken sera showed neg. results in sperm agglutination test. Conclusions: The phylogenetic distance between birds and human, the ability of chickens to produce high levels of specific antibodies following immunization with human sperm, and the transfer of large amts. of these antibodies from the serum of the laying hen to the **yolk** of the unfertilized egg have led to the development of Igs-based passive immunocontraceptives in the near future.

L10 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2002 ACS

2000:289578 Document No. 133:88007 Preparation of chicken egg **yolk** antibody and its heterogeneity. Yang, Yao-zhong; Song, Yu-wen; Ou, Ling; Fan, Long-bin; Yuan, Qin-sheng (Department of Applied Biology, ECUST, Shanghai, 200237, Peop. Rep. China). Huadong Ligong Daxue Xuebao, 26(1), 53-56 (Chinese) 2000. CODEN: HLIXEV. ISSN: 1006-3080. Publisher: Huadong Ligong Daxue Xuebao Bianjibu.

AB Titer and avidity development of the anti-BSA **IgY** in egg **yolk** during the immunization period, the influences of pH and (NH4)2SO4 on extn. of **IgY** from dild. egg **yolk** and the heterogeneity of anti-BSA **IgY** were discussed. The optimal condition of acidified treatment and salt pptn. were pH5.1 and 2.21 mol/L (NH4)2SO4, resp. The manifold antibodies with different chromatog. behaviors were discovered through immunoaffinity column chromatog. or Fe3+ metal-chelated affinity column chromatog. of anti-BSA **IgY**. Expts. show that anti-BSA **IgY** in immune egg **yolk** probably exists not only with diversity of avidity or specificity but also with difference of fundamental structure or physico-chem. properties.

L10 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2002 ACS

1999:162312 Document No. 130:181461 Aviary, vitellin antibody directed against substances with pharmacologic effect. Fischer, Mattias; Hlinak, Andreas; Fischer, Lothar; Henklein, Peter (Biologisch-Chemisches Institut Hoppegarten (Mark) G.m.b.H., Germany). Ger. Offen. DE 19737453 A1 19990304, 4 pp. (German). CODEN: GWXXBX. APPLICATION: DE 1997-19737453 19970825.

AB The invention describes aviary vitellin antibodies (egg **yolk** antibody) directed against pharmacol. active substances. The antibodies were obtained through immunization of chickens with drug carrier conjugates - drugs coupled to proteins, esp. BSA or KLH - and processing of the egg **yolk** of the immunized chickens. The antibodies (polyclonal **yolk** antibodies **IgY**) are appropriate for qual. and quant. detection of mentioned antigens in animal foods (such as meat, sausage or milk) and/or in other animal anal.-diagnostic materials (urine, feces or serum) based on antigen-antibody reactions.

L10 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2002 ACS

2000:22151 Document No. 132:164927 Immunoaffinity purification of specific immunoglobulin from egg **yolk**. Chen, Tian-bao; Li, Long; Xu, Xiao-hua; Zhang, Rong-zhen; Rao, Ping-fan (Institute of Biotechnology, Fuzhou University, Fuzhou, 350002, Peop. Rep. China). Sepu, 17(6), 563-566 (Chinese) 1999. CODEN: SEPUER. ISSN: 1000-8713. Publisher: Kexue Chubanshe.

AB Immunoaffinity column (Sepharose-4B) was made with bovine serum **albumin** (BSA) and used to isolate anti-BSA antibody from egg laid by hens which were immunized with BSA. Polyclonal antibody was eluted under different conditions (pH 5.0-2.8) because of its different affinity against antigen. SDS-PAGE and double-immunodiffusion anal. confirmed that antibody isolated from egg **yolk** was electrophoretically pure and specific. According to the sepn. aim in this paper, the final elution buffer was 0.1 mol/L glycine-HCl buffer, pH 2.8. The final antibody yield was higher than 90%. As a new development in chromatog. media, POROS has its max. pressure limit of 21 MPa. It has been widely used because of its high performance, high flow and large capacity. The sugar residue of the antibody was then oxidized and coupled to the hydrazide activated POROS HY. Pure targeted protein (BSA) was obtained through the POROS HY column. The tendency of specific antibody prodn. was investigated during the immunization period. The amt. of specific antibody has increased obviously after boost immunization.

L10 ANSWER 12 OF 24 MEDLINE DUPLICATE 5

1998154879 Document Number: 98154879. PubMed ID: 9495491. Effects of egg and **yolk** weights on **yolk** antibody (**IgY**) production in laying chickens. Li X; Nakano T; Sunwoo H H; Paek B H; Chae

H S; Sim J S. (Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Canada.) POULTRY SCIENCE, (1998 Feb) 77 (2) 266-70. Journal code: 0401150. ISSN: 0032-5791. Pub. country: United States. Language: English.

AB Twenty 35-wk-old chickens, including 10 Single Comb White Leghorn (SCWL) and 10 Rhode Island Red (RIR) hens, were used to examine the effects of egg and **yolk** weights on egg **yolk** antibody (**IgY**) production in the two strains of chickens immunized with BSA. The SCWL chickens had a greater ($P < 0.01$) percentage hen-day production and greater egg and **yolk** weights than did the RIR chickens. However, the anti-BSA antibody activities determined by ELISA in the serum and the egg **yolk** were similar ($P > 0.05$) between the SCWL and RIR chickens. Similarities between the two strains of hens were also observed in protein and total **IgY** contents (expressed as the percentage of wet weight of **yolk**) and the percentage of BSA-specific antibody in the total **IgY**. It was concluded that both the SCWL and RIR chickens immunized with BSA can produce egg **yolk** **IgY** containing similar proportions of BSA-specific antibodies. Therefore, the egg **yolk** weight and the percentage hen-day production, both of which are greater in the SCWL hens, are considered to be important factors for the efficient production of **IgY**.

L10 ANSWER 13 OF 24 MEDLINE DUPLICATE 6

1998180860 Document Number: 98180860. PubMed ID: 9521562. Use of an immunoaffinity column for tetrachlorodibenzo-p-dioxin serum sample cleanup. Shelver W L; Larsen G L; Huwe J K. (U.S. Department of Agriculture, Agriculture Research Service, Fargo, ND 58105-5674, USA.) JOURNAL OF CHROMATOGRAPHY. B, BIOMEDICAL SCIENCES AND APPLICATIONS, (1998 Feb 13) 705 (2) 261-8. Journal code: 9714109. ISSN: 1387-2273. Pub. country: Netherlands. Language: English.

AB Covalently linking 1-amino-3,7,8-trichlorodibenzo-p-dioxin with either keyhole limpet hemocyanin (KLH) or bovine serum **albumin** (BSA) provided antigens that generated antibodies in chickens. Competitive ELISA analysis demonstrated that the antibodies isolated from egg **yolk** (**IgY**) bound with 1,3,7,8-tetrachlorodibenzo-p-dioxin (1,3,7,8-TCDD). The antibodies were linked to CNBr-Sepharose to generate an immunoaffinity column. Radiolabeled 1,3,7,8-TCDD in a 0.05% Tween 20 solution was retained by the column and could be eluted by increasing the Tween 20 concentration. The binding efficiency for 10.7 ng per ml gel matrix ranged from 85 to 97%. Immunoaffinity columns generated by this method did not effectively bind 14C-1,3,7,8-TCDD from serum samples. Diluting the serum 1:20 with 0.05% Tween 20 increased the binding efficiency. Alternately, ethanol-hexane extraction followed by solid phase extraction on a carbon column using a fat removal protocol also provided an appropriate preaffinity column cleanup for serum samples. After this preaffinity column cleanup, spiked serum samples applied to the immunoaffinity column showed binding efficiencies of over 90%.

L10 ANSWER 14 OF 24 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.

1998:514641 Document No.: PREV199800514641. Effects of feeding level of full fat flax seed on immune response and fatty acid composition in egg. Chae, Hyun-Seok (1); Ahn, Chong-Nam (1); Paek, Bong-Hyun (1); Kim, Dong-Woon (1); Chung, Wan-Tae (1); Kim, Seok-Chul (1); Sim, Jeong-Seok. (1) Natl. Livestock Res. Inst., RDA, Suwon 441-350 South Korea . RDA Journal of Livestock Science, (June, 1998) Vol. 40, No. 1, pp. 145-151. ISSN: 1226-5667. Language: Korean. Summary Language: Korean; English.

AB This experiment was conducted to investigate the effects of feeding level of full fat flax on immune response and fatty acid composition in egg from white leghorn. Total 40 laying hens were divided 4 groups. Diets including 0, 3, 6, 9% of fullfat flax seed were fed for 11 weeks. The results obtained were summarized as follows: 1. Linolenic acid (LNA C18:3) in the fatty acid composition was increased as levels of full fat flax seed was

increased up 3, 6, 9%. Docosahexaenoic acid (DHA) was similar to LNA reaction. 2. **IgY** concentrations in eggs from chickens immunized with bovine serum **albumin** (BSA) were not different among treatment groups. 3. Anti-BSA **IgY** titers in eggs from chickens immunized with BSA were increased linearly to 25 apprx 50 days in all groups after injection antigen(BSA), 6% full fat flax seed treatment groups were the highest in all groups. 4. Egg and **yolk** weight were not different among treatment groups.

L10 ANSWER 15 OF 24 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
1998:514640 Document No.: PREV199800514640. Effects feeding of alpha-tocopherol and selenium in laying hen's lation including full fat flax seed on immune response and storage characteristics in egg. Chae, Hyun-Seok (1); Ahn, Chong-Nam (1); Paek, Bong-Hun (1); Kim, Dong-Woon (1); Chung, Wan-Tae (1); Kim, Seok-Chul (1); Sim, Jeong-Seok. (1) Natl. Livestock Res. Inst., RDA, Suwon-441-350 South Korea . RDA Journal of Livestock Science, (June, 1998) Vol. 40, No. 1, pp. 138-144. ISSN: 1226-5667. Language: Korean. Summary Language: Korean; English.

AB This experiment was conducted to investigate the effects of full fat flax seed, alpha-tocopherol and selenium on immune response and storage characteristics in egg from white leghorn. Total 50 laying hens were divided 5 groups. C group was fed common diet without any additives for 11 weeks, T1 was fed by diet with 3% full fat flax seed, T2 was fed by diet with 300 mg of alpha-tocopherol/kg and 3% full fat flax seed, T3 was fed by diet with 0.25 mg of selenium/kg and 3% full fat flax seed, T4 was fed by diet with alpha-tocopherol and selenium and 3% full fat flax seed. The results obtained were summarized as follows: 1. Egg and **yolk** weights were not different about tocopherol and selenium containing 3% full fat flax seed. 2. Immunoglobulin Y (**IgY**) concentrations in egg **yolks** from chickens immunized with bovine serum **albumin** (BSA) were not different among treatment groups. 3. AntiBSA **IgY** titers in eggs from chickens immunized with BSA were increased linearly to 25-50 days in all treatment groups after injection antigen(BSA), in particular T2 treatment group was the highest among all groups. 4. Haugh units during storage (25degreeC, 10 days) were increased highly at T2 and T4 groups. 5. The changing rate of compositions of fatty acid in egg during storage (25degreeC, 10 days) were not different among treatment groups.

L10 ANSWER 16 OF 24 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7
1998:296226 Document No.: PREV199800296226. Removal of bovine serum **albumin** from cow's milk using chicken egg-**yolk** antibodies immobilized on chitosan gel. Losso, Jack N. (1); Vanderstoep, John; Nakai, Shuryo. (1) Dep. Food Sci., Univ. British Columbia, 6650 NW Marine Drive, Vancouver, BC V6T 1Z4 Canada. Food and Agricultural Immunology, (March, 1998) Vol. 10, No. 1, pp. 47-56. ISSN: 0954-0105. Language: English.

AB Polyclonal chicken antibodies raised against bovine serum **albumin** (BSA) were immobilized on chitosan gel for the immunoaffinity isolation of BSA from cow's milk. Antibodies (**IgY**) against BSA were isolated from egg-**yolk**, purified and antibody reactivity to antigen was measured. **IgY** developed against BSA was reduced by 2-mercaptoethylamine. The reactivities of reduced and whole **IgY** against BSA were not significantly different. The reduced **IgY** was covalently linked to chitosan gel through stable covalent thioether linkages using sulfo-succinimidyl-4-(N-maleimidomethyl)cyclohexane-1-carboxylate (sulfo-SMCC) as a cross-linker. The density of antibody **IgY** immobilized on chitosan gel was approximately 3-5 mg per ml of chitosan gel. The ligand-binding capacity of immobilized **IgY** towards BSA was 0.35-0.44 mg BSA per ml of chitosan gel. A single pass of skimmed milk through the column allowed the removal of BSA from the milk

sample. The milk sample was analyzed, before and after immunoaffinity separation, by SDS-PAGE. BSA was desorbed with 0.5 M-glycine-HCl buffer at pH 2.8 but the reusability of the column was limited to three cycles. Alternatively, BSA was desorbed with 0.5 M-glycine-HCl buffer containing 2 M-NaCl at pH 4.6 after longer incubation times at a slower flow rate. The low ligand-binding capacity was not an impediment to reuse of the column. The column was reused more than 20 times with minimal loss of binding capacity.

L10 ANSWER 17 OF 24 SCISEARCH COPYRIGHT 2002 ISI (R)
1998:400164 The Genuine Article (R) Number: ZP176. Antibody response in laying hens with small amounts of antigen. Larsson A (Reprint); Carlander D; Wilhelmsson M. UNIV UPPSALA HOSP, DEPT CLIN CHEM, S-75185 UPPSALA, SWEDEN (Reprint); SWEDISH UNIV AGR SCI, DEPT ANIM BREEDING & GENET, S-75007 UPPSALA, SWEDEN. FOOD AND AGRICULTURAL IMMUNOLOGY (MAR 1998) Vol. 10, No. 1, pp. 29-36. Publisher: CARFAX PUBL CO. PO BOX 25, ABINGDON OX14 3UE, OXFORDSHIRE, ENGLAND. ISSN: 0954-0105. Pub. country: SWEDEN. Language: English.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Chicken antibodies offer many advantages over the traditional mammalian ones. A laying hen produces large amounts of **yolk** antibodies and the use of **yolk** antibodies eliminates the painful procedure of collecting blood from the animal. Thus, the use of chicken antibodies will reduce both the number of animals required to produce antibodies and also animal distress. Chicken antibodies also have several biochemical advantages compared to mammalian antibodies: they often increase the signal and reduce interference in many assays. However, the species chosen for antibody production have usually been mammals. This is probably due to tradition, but also to limited knowledge about the production of chicken antibodies. We studied the immune response in the chicken using small amounts of mammalian antigen, and show that a good immune response can be obtained with 0.1-1.0 mu g of bovine serum **albumin**.

L10 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2002 ACS
1996:135988 Document No. 124:173451 Detection, assay and isolation of compounds having the taxane ring skeleton. Bombardelli, Ezio; Concetti, Antonio; Venanzi, Franco M. (Indena S.P.A., Italy). Eur. Pat. Appl. EP 696596 A1 19960214, 14 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1995-302900 19950428. PRIORITY: IT 1994-MI1499 19940719.
AB The invention relates to a process for the detn. and isolation from any source, either vegetable or biotechnol., of taxol and 10-deacetylbaccatin III (DAB) and their analogs using polyclonal **IgY** antibodies prepd. form egg **yolk** from hens previously immunized with succinyl-taxol and succinyl-DAB conjugated with bovine **albumin**. These antibodies are immobilized on a matrix for selective isolation of the above taxanes from vegetable exts. or cell or microorganism culture media. In example, 2'-succinyl taxol was prepd. by reacting taxol with succinic anhydride, conjugated with **albumin**, and used for raising antibodies in egg-laying hens. The prepd. antibody was immobilized on Avid-chrom column and used for isolating taxol from Taxus baccata. Similarly, anti-10-succinyl-10-deacetylbaccatin III **IgY** was prepd. for sepg. 10-deacetylbaccatin III from Taxus wallichiana.

L10 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2002 ACS
1996:51145 Document No. 124:85172 Enzyme immunoassay for the detection of spiramycin in raw milk. Albrecht, Ute; Hammer, P.; Heeschen, W. (Federal Dairy Research Centre, Institute for Hygiene, Kiel, 24103, Germany). International Dairy Federation [Special Issue] S.I., 9505(Symposium on Residues of Antimicrobial Drugs and Other Inhibitors in Milk, 1995), 258-9 (English) 1995. CODEN: IDFSEO. ISSN: 1025-8515. Publisher: International Dairy Federation.
AB An enzyme immunoassay for the detn. of spiramycin residues in raw milk is

presented. Antibodies were raised in chicken using spiramycin linked to BSA (bovine serum **albumin**) as immunogen. Specific antibodies (**IgY**) could be extd. easily from egg **yolk** by pptn. with polyethylene glycol. A competitive antibody-capture test was developed with a detection limit of 5.6 .mu.g/kg spiramycin for skimmed milk. Repeatability of the ELISA was tested by analyzing prepd. milk samples contg. different concns. of spiramycin. Coeffs. of variation were between 5.1 and 7.9%. Results after examn. of spiked samples demonstrated, that classification of positives and negatives as well as quantification up to the range of the MRL (150 .mu.g/kg) is possible without sample diln. The immunoassay described is suitable as a screening method for the detection of spiramycin at the MRL and fulfils the requirements of the EU Regulation 675/92.

L10 ANSWER 20 OF 24 CAPLUS COPYRIGHT 2002 ACS

1995:756531 Document No. 123:254009 Anti-idiotype and anti-anti-idiotype antibodies for aflatoxin from laying hens. Hsu, Kuo-Hui; Chu, Fun S. (Food Research Institute, University of Wisconsin, Madison, WI, 53706, USA). Food and Agricultural Immunology, 7(2), 163-74 (English) 1995. CODEN: FAIMEZ. ISSN: 0954-0105. Publisher: Carfax.

AB Anti-idiotype (anti-id) antibodies (IgY2) for aflatoxin (AF) were obtained from the egg **yolks** of laying hens immunized with affinity-purified rabbit polyclonal anti-aflatoxin B1 (AFB1) carboxymethyloxime-bovine serum **albumin** (BSA) antibodies (pAb1). The IgY2 were affinity purified and then subjected to various analyses. Inhibition of the binding of pAb1 to the solid-phase AFB1-BSA by IgY2 and the binding of pAb1 to the solid-phase IgY2 by free AFB1 were demonstrated in a biotin-avidin amplified ELISA system. The concn. of IgY2 causing 50% inhibition (ID50) of the binding of pAb1 to AFB1-BSA was found to be 2.45 .mu.g/assay. The ID50 concn. of the binding of pAb1 to IgY2 by free AFB1 was found to be 0.30 .mu.g/assay. Inhibition of the binding of AFB1-horseradish peroxidase (HRP) to the solid-phase pAb1 by IgY2 (ID50 = 9.65 .mu.g/assay) was also demonstrated in the direct ELISA. Egg **yolk** anti-anti-id antibodies (IgY3) were obtained by immunizing laying hens with rabbit pAb2 against anti-AFB3-hemisuccinate-BSA monoclonal antibody. IgY3 was subjected to affinity chromatog. purifn. with Sepharose gel armed with AFB2-carboxymethyloxime, and then subjected to various analyses. ELISA anal. revealed that IgY3 has characteristics similar to other anti-AFB antibodies induced in various exptl. animals. In the direct ELISA, the ID50 of the binding of AFB1-HRP to solid-phase IgY3 by AFB1 was found to be 0.12 ng mL-1. In the indirect ELISA, the ID50 of the binding of IgY3 to solid-phase AFB1-BSA by AFB1 was found to be 2.2 ng mL-1. The IgY3-based ELISA anal. showed higher sensitivity than that of the egg **yolk** antibodies directly against AFB-protein conjugates (IgY1). A good correlation was found for the data obtained from IgY3-based and pAb1-based ELISAs in the anal. of AFB in the fungal culture filtrates.

L10 ANSWER 21 OF 24 MEDLINE

95071630 Document Number: 95071630. PubMed ID: 7980875. Immunorecognition of ring skeleton of taxanes by chicken egg **yolk** antibodies. Concetti A; Ripani E; Barboni L; Torregiani E; Bombardelli E; Gariboldi P; Venanzi F M. (Dipartimento di Biologia M.C.A., Camerino MC, Italy.) BIOLOGICAL CHEMISTRY HOPPE-SEYLER, (1994 Jun) 375 (6) 419-23. Journal code: 8503054. ISSN: 0177-3593. Pub. country: GERMANY: Germany, Federal Republic of. Language: English.

AB Anti-10 deacetylbaccatin III (DAB) antibodies (**IgY**) were elicited in hens immunized with a succinyl-DAB/BSA conjugate and extracted from egg **yolk**. As shown by indirect competitive inhibition enzyme immunoassay (CIEIA), the addition of free-DAB competitively inhibited the binding of affinity purified anti-DAB **IgY** to DAB/BSA solid phase conjugated antigen. The assay enabled the detection of DAB in concentrations as low as 7.5ng/ml (13.7 nM DAB), whereas anti-DAB

IgY did not react with taxol even at a concentration a thousand times higher. The structural requirements of the diterpenoid nucleus for binding to **IgY** were considered on the basis of the levels of cross-reaction found with 10 authentic taxanes. The results indicate that anti-DAB **IgY** represents the first high affinity antibody produced capable of recognizing the ring skeleton of taxol precursors.

L10 ANSWER 22 OF 24 SCISEARCH COPYRIGHT 2002 ISI (R)
93:648190 The Genuine Article (R) Number: MC621. DEVELOPMENT OF A QUANTITATIVE AND SENSITIVE ENZYME-LINKED-IMMUNOSORBENT-ASSAY FOR OCHRATOXIN-A USING ANTIBODIES FROM THE **YOLK** OF THE LAYING HEN. CLARKE J R; MARQUARDT R R (Reprint); OOSTERVELD A; FROHLICH A A; MADRID F J; DAWOOD M. UNIV MANITOBA, FAC AGR & FOOD SCI, DEPT FOODS & NUTR, WINNIPEG R3T 2N2, MANITOBA, CANADA; UNIV MANITOBA, FAC AGR & FOOD SCI, DEPT FOOD SCI, WINNIPEG R3T 2N2, MANITOBA, CANADA; CADHAM PROV LAB, WINNIPEG, MB, CANADA; UNIV MANITOBA, FAC AGR & FOOD SCI, DEPT ANIM SCI, WINNIPEG R3T 2N2, MANITOBA, CANADA. JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY (OCT 1993) Vol. 41, No. 10, pp. 1784-1789. ISSN: 0021-8561. Pub. country: CANADA. Language: ENGLISH.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB Antibodies directed against ochratoxin A (OA) were obtained from hen egg **yolk** using an optimized purification procedure and applied in an enzyme-linked immunosorbent assay (ELISA) for OA in swine finisher diets. The egg **yolk** antibody could be recovered at levels as high as 70-80% with purities greater than 86-92% using a mixture of aqueous buffer and chloroform for lipid extraction and poly(ethylene glycol) for antibody precipitation. Ochratoxins C, B, and alpha and the structurally related mycotoxin citrinin were found to cross-react with the antibody 400, 100, 33.3, and 2%, respectively, in an indirect competitive ELISA. Ochratoxin A could be detected in swine finisher diets at levels greater than 50 ppb using a simplified sample preparation procedure and a indirect competitive ELISA. Recoveries of OA from the diets were validated by conventional HPLC analysis using a proven sample extraction protocol. ELISA-determined OA values correlated highly with those obtained using HPLC analysis (r = 0.98). Assay sensitivity was found to be dependent on background absorbance. The mixed anhydride (MA) coupling chemistry used to prepare the immunogens promoted high background absorbances in the quantitative ELISA. The background was overcome by using N-hydroxysuccinimide activated ester coupling chemistry for the preparation of plate coating antigen and or incubation of the antibody with bovine serum **albumin** that had been subjected to the MA reaction. This study demonstrates that antibodies from hen egg **yolk** can be readily obtained in good yield and purity and used to develop a highly sensitive ELISA for OA.

L10 ANSWER 23 OF 24 SCISEARCH COPYRIGHT 2002 ISI (R)
92:529948 The Genuine Article (R) Number: JL777. EVALUATION OF SUBCUTANEOUS CHAMBERS AS AN ALTERNATIVE TO CONVENTIONAL METHODS OF ANTIBODY-PRODUCTION IN CHICKENS. ERMELING B L (Reprint); STEFFEN E K; FISH R E; HOOK R R. UNIV MISSOURI, COLUMBIA, MO, 65201 (Reprint). LABORATORY ANIMAL SCIENCE (AUG 1992) Vol. 42, No. 4, pp. 402-407. ISSN: 0023-6764. Pub. country: USA. Language: ENGLISH.
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS

AB We compared antibody levels among serum, egg **yolk** extract, and granuloma fluid in chickens immunized with bovine serum **albumin** (BSA). One group of hens was immunized by intramuscular and subcutaneous injection of bovine serum **albumin** in complete Freund's adjuvant, followed by two subsequent booster injections in incomplete Freund's adjuvant. Two other groups were surgically implanted with plastic, perforated wiffle balls (subcutaneous chambers). After a 30-day recovery period, one of the groups with subcutaneous chambers was immunized with BSA in sterile water with two subsequent boosts. The other group was injected with only sterile water. Serum samples, eggs, and

granuloma fluid were collected biweekly and analyzed to determine specific IgG, total IgG, and total protein. The subcutaneous chambers were well tolerated. Quantitative ELISAs of serum, egg **yolk** extract, and granuloma fluid specimens disclosed that specific antibody levels were present in all specimens by 2 weeks after primary immunization. During the course of the experiment, specific antibody levels of serum and egg **yolk** specimens were significantly higher than those of granuloma fluid ($P < 0.05$). However, an additional injection of antigen into the subcutaneous chambers resulted in specific antibody levels in granuloma fluid specimens that were comparable to those of serum and egg **yolk** extract. Use of subcutaneous chambers in chickens may be a viable alternative to routine antibody production methods.

L10 ANSWER 24 OF 24 CAPLUS COPYRIGHT 2002 ACS
1986:441067 Document No. 105:41067 Manufacture and use of fowl egg antibodies. Polson, Alfred (South African Inventions Development Corp., S. Afr.). U.S. US 4550019 A 19851029, 23 pp. Cont.-in-part of U.S. 4,357,272. (English). CODEN: USXXAM. APPLICATION: US 1982-399094 19820716. PRIORITY: US 1979-20786 19790315.

AB Immunol. prepns. are prepd. by immunizing hens with an immunogen to a stage of hyperimmunization. The immunogenicity of the immunogen can be enhanced by enlarging the size of the immunogen. The **IgY** antibodies were isolated from the egg **yolk**. Thus, pullets received an i.m. injection of an antibody, such as a plant virus, and were reinjected at regular intervals until a stage of hyper immunization was achieved. Eggs were then gathered over a period of 9 mo and stored at 4.degree. until the **yolks** were processed. The **yolks** were collected from several eggs, washed to remove all of the **albumin**, and dild. with an equal vol. of buffer. Pulverized polyethylene glycol (PEG) was add to 3.5%, to remove the lipoidal matter and casein-like protein from the **yolk**. After centrifugation at 12,000 g the **yolk** supernatant was treated further with PEG to a final concn. of 12%. At this concn. the PEG caused the complete displacement of the **IgY**. After centrifugation the **IgY** -contg. fraction was subjected to the PEG treatment again to remove any remaining contaminants. These antibodies can be used in the diagnosis and treatment of disease.

```
=> s l1 and CS antigen
L11           0 L1 AND CS ANTIGEN

=> s l1 and c sticklandii
L12           0 L1 AND C STICKLANDII

=> s P antigen and P anaerobius
L13           0 P ANTIGEN AND P ANAEROBIUS

=> s "P antigen" and P anaerobius
L14           0 "P ANTIGEN" AND P ANAEROBIUS

=> s P antigen
L15         667 P ANTIGEN

=> s l15 and bacteria
L16          40 L15 AND BACTERIA

=> s l16 and dietary wasting
L17           0 L16 AND DIETARY WASTING

=> s l16 and IgY
L18           0 L16 AND IGY
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=> s l15 adn IgY
MISSING OPERATOR L15 ADN
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l15 and IgY
L19           0 L15 AND IGY

=> s (nash p?/au or rosevear j?/au or robinson d?/au)
L20       13100 (NASH P?/AU OR ROSEVEAR J?/AU OR ROBINSON D?/AU)

=> s l20 and IgY
L21           0 L20 AND IGY

=> s l20 and yolk antibody
L22           0 L20 AND YOLK ANTIBODY

=> s colony forming protein wasting immunogens
L23           0 COLONY FORMING PROTEIN WASTING IMMUNOGENS

=> d l20 cbib abs

L20  ANSWER 1 OF 13100      MEDLINE
2002466962  Document Number: 22214308.     PubMed ID: 12226521.
     F-actin-dependent endocytosis of cell wall pectins in meristematic root
     cells. Insights from brefeldin a-induced compartments. Baluska Frantisek;
     Hlavacka Andrej; Samaj Jozef; Palme Klaus; Robinson David G;
     Matoh Toru; McCurdy David W; Menzel Diedrik; Volkmann Dieter. (Plant Cell
     Biology, Institute of Botany, University of Bonn, Kirschallee 1, D-53115
     Bonn, Germany. ) PLANT PHYSIOLOGY, (2002 Sep) 130 (1) 422-31.  Journal
     code: 0401224. ISSN: 0032-0889. Pub. country: United States. Language:
     English.
AB   Brefeldin A (BFA) inhibits exocytosis but allows endocytosis, making it a
     valuable agent to identify molecules that recycle at cell peripheries. In
     plants, formation of large intracellular compartments in response to BFA
     treatment is a unique feature of some, but not all, cells. Here, we have
     analyzed assembly and distribution of BFA compartments in development- and
     tissue-specific contexts of growing maize (Zea mays) root apices.
     Surprisingly, these unique compartments formed only in meristematic cells
     of the root body. On the other hand, BFA compartments were absent from
     secretory cells of root cap periphery, metaxylem cells, and most
     elongating cells, all of which are active in exocytosis. We report that
     cell wall pectin epitopes counting rhamnogalacturonan II dimers
     cross-linked by borate diol diester, partially esterified (up to 40%)
     homogalacturonan pectins, and (1-->4)-beta-D-galactan side chains of
     rhamnogalacturonan I were internalized into BFA compartments. In contrast,
     Golgi-derived secretory (esterified up to 80%) homogalacturonan pectins
     localized to the cytoplasm in control cells and did not accumulate within
     characteristic BFA compartments. Latrunculin B-mediated depolymerization
     of F-actin inhibited internalization and accumulation of cell wall pectins
     within intracellular BFA compartments. Importantly, cold treatment and
     protoplasting prevented internalization of wall pectins into root cells
     upon BFA treatment. These observations suggest that cell wall pectins of
     meristematic maize root cells undergo rapid endocytosis in an
     F-actin-dependent manner.


=> s l20 and protein wasting immunogen
L24           0 L20 AND PROTEIN WASTING IMMUNOGEN

=> d his

     (FILE 'HOME' ENTERED AT 14:19:50 ON 16 SEP 2002)
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FILE 'MEDLINE, EMBASE, BIOSIS, SCISEARCH, CAPLUS' ENTERED AT 14:20:00 ON 16 SEP 2002

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L1          1289 S IGY
L2             1 S L1 AND DIETARY SUPPLEMENT
L3             4 S L1 AND ANIMAL FEED
L4             4 DUP REMOVE L3 (0 DUPLICATES REMOVED)
L5             0 S L1 AND DIETARY PROTEIN WASTING
L6           647 S L1 AND YOLK
L7            37 S L6 AND ALBUMIN
L8            21 S L7 AND ANTIGEN
L9            14 DUP REMOVE L8 (7 DUPLICATES REMOVED)
L10           24 DUP REMOVE L7 (13 DUPLICATES REMOVED)
L11            0 S L1 AND CS ANTIGEN
L12            0 S L1 AND C STICKLANDII
L13            0 S P ANTIGEN AND P ANAEROBIUS
L14            0 S "P ANTIGEN" AND P ANAEROBIUS
L15          667 S P ANTIGEN
L16           40 S L15 AND BACTERIA
L17            0 S L16 AND DIETARY WASTING
L18            0 S L16 AND IGY
L19            0 S L15 AND IGY
L20        13100 S (NASH P?/AU OR ROSEVEAR J?/AU OR ROBINSON D?/AU)
L21            0 S L20 AND IGY
L22            0 S L20 AND YOLK ANTIBODY
L23            0 S COLONY FORMING PROTEIN WASTING IMMUNOGENS
L24            0 S L20 AND PROTEIN WASTING IMMUNOGEN

=> s l20 adn e coli
MISSING OPERATOR L20 ADN
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l20 and E coli
L25           30 L20 AND E COLI

=> dup remove l25
PROCESSING COMPLETED FOR L25
L26            9 DUP REMOVE L25 (21 DUPLICATES REMOVED)

=> d l26 1-9 cbib abs

L26  ANSWER 1 OF 9     MEDLINE                                DUPLICATE 1
1999329328  Document Number: 99329328.     PubMed ID: 10398728.   A plastidial
      lysophosphatidic acid acyltransferase from oilseed rape. Bourgis F; Kader
      J C; Barret P; Renard M; Robinson D; Robinson C; Delseny M;
      Roscoe T J. (Laboratoire Physiologie Cellulaire et Moleculaire, Universite
      Pierre et Marie Curie, Centre National de la Recherche Scientifique Unite
      Mixte de Recherche 7632, Tour 53, 4 Place Jussieu, 75252 Paris, France. )
      PLANT PHYSIOLOGY, (1999 Jul) 120 (3) 913-22.  Journal code: 0401224. ISSN:
      0032-0889. Pub. country: United States. Language: English.
AB    The biosynthesis of phosphatidic acid, a key intermediate in the
      biosynthesis of lipids, is controlled by lysophosphatidic acid (LPA, or
      1-acyl-glycerol-3-P) acyltransferase (LPAAT, EC 2.3.1.51). We have
      isolated a cDNA encoding a novel LPAAT by functional complementation of
      the Escherichia coli mutant plsC with an immature embryo cDNA library of
      oilseed rape (Brassica napus). Transformation of the acyltransferase-
      deficient E. coli strain JC201 with the cDNA sequence
      BAT2 alleviated the temperature-sensitive phenotype of the plsC mutant and
      conferred a palmitoyl-coenzyme A-preferring acyltransferase activity to
      membrane fractions. The BAT2 cDNA encoded a protein of 351 amino acids
      with a predicted molecular mass of 38 kD and an isoelectric point of 9.7.
      Chloroplast-import experiments showed processing of a BAT2 precursor
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protein to a mature protein of approximately 32 kD, which was localized in the membrane fraction. BAT2 is encoded by a minimum of two genes that may be expressed ubiquitously. These data are consistent with the identity of BAT2 as the plastidial enzyme of the prokaryotic glycerol-3-P pathway that uses a palmitoyl-ACP to produce phosphatidic acid with a prokaryotic-type acyl composition. The homologies between the deduced protein sequence of BAT2 with prokaryotic and eukaryotic microsomal LAP acytransferases suggest that seed microsomal forms may have evolved from the plastidial enzyme.

L26 ANSWER 2 OF 9 MEDLINE DUPLICATE 2
1999077292 Document Number: 99077292. PubMed ID: 9862476. Cloning and expression of the ApaLI, NspI, NspHI, SacI, ScaI, and SapI restriction-modification systems in Escherichia coli. Xu S Y; Xiao J P; Ettwiller L; Holden M; Aliotta J; Poh C L; Dalton M; **Robinson D P** ; Petronzio T R; Moran L; Ganatra M; Ware J; Slatko B; Benner J. (New England Biolabs, Inc., Beverly, MA 01915, USA.. xus@neb.com) . MOLECULAR AND GENERAL GENETICS, (1998 Nov) 260 (2-3) 226-31. Journal code: 0125036. ISSN: 0026-8925. Pub. country: GERMANY: Germany, Federal Republic of. Language: English.

AB The genes encoding the ApaLI (5'-GTGCAC-3'), NspI (5'-RCATGY-3'), NspHI (5'-RCATGY-3'), SacI (5'-GAGCTC-3'), SapI (5'-GCTCTTCN1-3', 5'-N4GAAGAGC-3') and ScaI (5'-AGTACT-3') restriction-modification systems have been cloned in **E. coli**. Amino acid sequence comparison of M.ApaLI, M.NspI, M.NspHI, and M.SacI with known methylases indicated that they contain the ten conserved motifs characteristic of C5 cytosine methylases. NspI and NspHI restriction-modification systems are highly homologous in amino acid sequence. The C-termini of the NspI and NlaIII (5'-CATG-3') restriction endonucleases share significant similarity. 5mC modification of the internal C in a SacI site renders it resistant to SacI digestion. External 5mC modification of a SacI site has no effect on SacI digestion. N4mC modification of the second base in the sequence 5'-GCTCTTC-3' blocks SapI digestion. N4mC modification of the other cytosines in the SapI site does not affect SapI digestion. N4mC modification of ScaI site blocks ScaI digetion. A DNA invertase homolog was found adjacent to the ApaLI restriction-modification system. A DNA transposase subunit homolog was found upstream of the SapI restriction endonuclease gene.

L26 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2002 ACS
1998:546841 Document No. 129:287185 Production of pea seed lipoxygenases in Escherichia coil. Hughes, R. K.; Wu, Z.; **Robinson, D. S.**; Casey, R. (Department of Applied Genetics, John Innes Centre, Norwich, NR4 7UH, UK). Plant Proteins from European Crops, 94-98. Editor(s): Gueguen, Jacques; Popineau, Yves. Springer: Berlin, Germany. (English) 1998. CODEN: 66NVA8.

AB The two major forms of lipoxygenase from pea seeds (LOX 2 and 3) have been cloned and expressed as sol., active, non-fusion proteins in Escherichia coli. Unambiguous measurements to date comparing the homogeneously purified LOX 3 from **E. coli** and pea seeds have confirmed the authenticity of this recombinant product. Preliminary comparisons of LOX 2 in partially-purified exts. suggested that the recombinant product was also authentic. Comparison of the enzymic properties of the two isoforms has indicated that they are quite different.

L26 ANSWER 4 OF 9 MEDLINE DUPLICATE 3
1998306050 Document Number: 98306050. PubMed ID: 9639559. Characterization of authentic recombinant pea-seed lipoxygenases with distinct properties and reaction mechanisms. Hughes R K; Wu Z; **Robinson D S**; Hardy D; West S I; Fairhurst S A; Casey R. (John Innes Centre, Norwich Research Park, Norwich NR4 7UH, U.K.. rhughes@bbsrc.ac.uk) . BIOCHEMICAL JOURNAL, (1998 Jul 1) 333 (Pt 1)

33-43. Journal code: 2984726R. ISSN: 0264-6021. Pub. country: ENGLAND: United Kingdom. Language: English.

AB The two major isoforms of lipoxygenase (LOX-2 and LOX-3) from pea (Pisum sativum L. cv. Birte) seeds have been cloned and expressed from full-length cDNAs as soluble, active, non-fusion proteins in Escherichia coli. A comparison of both isoforms purified to apparent homogeneity from **E. coli** and pea seeds has confirmed the authenticity of the recombinant products and established the properties of the native enzymes. Despite 86% similarity at the amino acid sequence level, the enzymes have distinct properties. They have been characterized in terms of specific activity, Fe content, optimum pH, substrate and product specificity, apparent Km and Vmax for the preferred substrate, linoleic acid, and interfacial behaviour with linoleic acid. We have used this evidence, in addition to EPR spectroscopy of the hydroperoxide-activated enzymes and estimates of kcat/Km, to propose different reaction mechanisms for linoleic acid oxidation for the two isoforms. The differences relate primarily to carbonyl production from linoleic acid for which we propose a mechanism. This implicates the release of a peroxyl radical in an aerobic hydroperoxidase reaction, as the source of the carbonyl compounds formed by dismutation of the liberated peroxyl radical.

L26 ANSWER 5 OF 9 MEDLINE DUPLICATE 4

93186610 Document Number: 93186610. PubMed ID: 8444723. Protective effects of anti-O polysaccharide and anti-lipid A monoclonal antibodies on pulmonary hemodynamics. Chen T Y; Warren H S; Greene E; Black K M; Frostell C G; **Robinson D R**; Zapol W M. (Department of Anesthesia, Harvard Medical School, Massachusetts General Hospital, Boston 02114.) JOURNAL OF APPLIED PHYSIOLOGY, (1993 Jan) 74 (1) 423-7. Journal code: 8502536. ISSN: 8750-7587. Pub. country: United States. Language: English.

AB Monoclonal antibodies (MAbs) directed to endotoxin can protect in some animal models against the pathophysiological effects of endotoxin infusion. When 0.02 microgram/kg of lipopolysaccharide (LPS) derived from Escherichia coli O111:B4 was incubated in vitro for 2 h with the murine immunoglobulin G MAb, 5B10, directed against the O-polysaccharide antigenic domain of **E. coli** O111:B4 and then the mixture was infused into sheep, we noted significant protection. The second temperature peak was decreased ($P < 0.05$ vs. LPS control). The acute pulmonary arterial pressure elevation was diminished (mean peak pulmonary arterial pressure 23.2 +/- 2.5 mmHg, $P < 0.05$ vs. LPS control), and the peak plasma thromboxane B2 level was reduced (mean peak thromboxane B2 level 0.50 +/- 0.15 ng/ml, $P < 0.05$ vs. LPS control). In contrast, preincubation of the LPS with a human immunoglobulin M MAb, HA-1A, directed against the core glycolipid of the LPS molecule provided no protective effects in this sheep model. This finding is in agreement with recent studies reporting HA-1A may bind to antibiotic-treated bacteria but not to purified smooth LPS.

L26 ANSWER 6 OF 9 MEDLINE DUPLICATE 5

93388426 Document Number: 93388426. PubMed ID: 8376269. Protective effects of E5, an antiendotoxin monoclonal antibody, in the ovine pulmonary circulation. Chen T Y; Zapol W M; Greene E; **Robinson D R** ; Rubin R H. (Department of Anesthesia, Massachusetts General Hospital, Boston 02114.) JOURNAL OF APPLIED PHYSIOLOGY, (1993 Jul) 75 (1) 233-9. Journal code: 8502536. ISSN: 8750-7587. Pub. country: United States. Language: English.

AB The cross-protective effects of a murine immunoglobulin M monoclonal antilipid A antibody (E5 MAb) were tested by challenging awake sheep with mixtures of in vitro incubated E5 MAb (0.02 mg/kg) with lipopolysaccharide (LPS, 0.02 micrograms/kg) derived from Escherichia coli O111:B4, **E . coli** O55:B5, or Serratia marcescens. Intravenous infusion of these LPS preparations without antibody into awake sheep produced a similar pattern of fever, leukopenia, plasma thromboxane B2 (TxB2)

release, and acute pulmonary vasoconstriction with pulmonary hypertension. The addition of MAb E5 to LPS from **E. coli** O111:B4 reduced these responses to the LPS in a fashion comparable to that achieved with an MAb specific to the **E. coli** O111:B4 O-side chain. Incubation of LPS derived from **E. coli** O55:B5 with the E5 MAb only slightly diminished acute pulmonary hypertension, the delayed temperature increase, and the degree of leukopenia (all P = NS) but reduced the mean peak TxB2 at 60 min (P < 0.05) compared with a control infusion of **E. coli** O55:B5 LPS. We were unable to demonstrate any protective effects on the pulmonary circulation from incubating E5 with LPS derived from S. marcescens. Preincubation of B55 MAb (a murine immunoglobulin M MAb directed against a human milk fat globulin), the control antibody, with LPS from **E. coli** 0111:B4 decreased the mean peak TxB2 but had no effect on the other parameters. We conclude that incubating E5 with LPS protects the pulmonary circulation of sheep from challenge with LPS derived from the parent **E. coli** strain. There were trends toward protection by E5 against LPS from 055:B5 **E. coli**, but these did not reach statistical significance.(ABSTRACT TRUNCATED AT 250 WORDS)

L26 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2002 ACS

1989:532230 Document No. 111:132230 Effects of recombinant human tumor necrosis factor alpha, lymphotoxin, and Escherichia coli lipopolysaccharide on hemodynamics, lung microvascular permeability, and eicosanoid synthesis in anesthetized sheep. Kreil, E. A.; Greene, E.; Fitzgibbon, C.; **Robinson, D. R.**; Zapol, W. M. (Harvard Med. Sch., Massachusetts Gen. Hosp., Boston, MA, 02114, USA). Circ. Res., 65(2), 502-14 (English) 1989. CODEN: CIRUAL. ISSN: 0009-7330.

AB Recombinant human tumor necrosis factor .alpha. (rhTNF.alpha.), lymphotoxin (rhLT), and **E. coli** 0111:B4 lipopolysaccharide (LPS) were infused into anesthetized sheep with a lung lymph fistula to compare their effects on systemic and pulmonary hemodynamics, lung lymph dynamics, and eicosanoid release. RhTNF.alpha. (25-150 .mu.g/kg), but not rhLT (25 .mu.g/kg) rapidly increased lung lymph and plasma levels of 6-keto-prostaglandin F1.alpha. (6-k-PGF1.alpha.) and caused profound systemic vasodilation and hypotension. Meclofenamate pretreatment (10 mg/kg) of other sheep given 25 .mu.g/kg rhTNF.alpha. prevented the increase of lymph and plasma 6-k-PGF1.alpha. levels, systemic vasodilation, and the early (<2 h) but not the late (4-6 h) hypotension caused by rhTNF. LPS (1 .mu.g/kg) induced a briefer increase of lymph 6-k-PGF1.alpha. levels than did rhTNF.alpha. while plasma 6-k-PGF1.alpha. levels did not increase. LPS induced more gradual hypotension than did rhTNF.alpha. but did not cause systemic vasodilation. LPS and rhTNF.alpha., but not rhLT, increased lymph TXB2 levels during the first hour of study, whereas only LPS acutely increased plasma TXB2 levels. LPAs caused acute pulmonary vasoconstriction and greater acute pulmonary artery hypertension than did either rhTNF.alpha. or rhLT. Whereas LPS-treated sheep required less fluid transfusion than rhTNF.alpha.-treated sheep to maintain mean systemic arterial pressure >50 mm Hg, LPS infusion caused a greater increase of lung lymph protein clearance. RhTNF.alpha. caused minimal alterations of lung microvascular permeability. Thus, eicosanoid mediators contribute importantly to differences of systemic and pulmonary hemodynamics caused by these agents in sheep. RhTNF.alpha. cannot account for all of the LPS-induced hemodynamic, lung lymph, and eicosanoid responses in sheep.

L26 ANSWER 8 OF 9 MEDLINE DUPLICATE 6

88041893 Document Number: 88041893. PubMed ID: 3118413. Dose-dependent effects of a pyridoquinazoline thromboxane synthetase inhibitor on arachidonic acid metabolites and hemodynamics during **E. coli** endotoxemia in anesthetized sheep. Morel D R; Huttemeier P C; Skoskiewicz M J; Nguyenduy T; Melvin C; **Robinson D R**; Zapol W M.

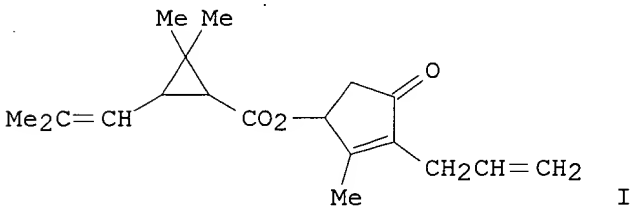
(Department of Anesthesia, Massachusetts General Hospital, Boston 02114.)
PROSTAGLANDINS, (1987 Jun) 33 (6) 879-902. Journal code: 0320271. ISSN: 0090-6980. Pub. country: United States. Language: English.

AB We investigated the effects of a new pyridoquinazoline thromboxane synthetase inhibitor infused before administering Escherichia Coli endotoxin into 18 anesthetized sheep with lung lymph fistulas. In normal sheep increasing plasma Ro 23-3423 concentrations were associated with increased plasma levels of 6-keto-PGF1 alpha, a reduced systemic vascular resistance (SVR, r = -0.80) and systemic arterial pressure (SAP, r = -0.92), the mean SAP falling from 80 to 50 mm Hg at the 20 and 30 mg/kg doses. Endotoxin infused into normal sheep caused transient pulmonary vasoconstriction associated with increased TxB2 and 6-keto-PGF1 alpha levels while vasoconstriction and TxB2 increase were significantly inhibited by pretreatment with Ro 23-3423 in a dose-dependent manner. When compared to controls, plasma and lymph levels of 6-keto-PGF1 alpha, PGF2 alpha and PGE2 after endotoxin infusion were increased several-fold by administering Ro 23-3423 up to plasma levels of 10 micrograms/ml. Doses over 30 mg/kg with blood levels above 10 micrograms/ml reduced plasma and lymph levels of 6-keto-PGF1 alpha, PGF2 alpha and PGE2, suggesting cyclooxygenase blockade at this dose. The peak 6-keto-PGF1 alpha levels at 60 min after endotoxin infusion in sheep with Ro-23-3423 levels below 10 micrograms/ml were associated with the greatest systemic hypotension due to a reduced SVR (r = -0.86). After endotoxin infusion the leukotrienes B4, C4, D4 and E4 in lung lymph were assayed by radioimmunoassay and high pressure liquid chromatography and remained at baseline values.

L26 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2002 ACS

1986:201920 Document No. 104:201920 In vitro microbiological mutagenicity and unscheduled DNA synthesis studies of fifteen pesticides. Simmon, V. F.; Riccio, E. S.; **Robinson, D. E.**; Mitchell, A. D. (SRI Int., Menlo Park, CA, USA). Report, LSU-3493, EPA/600/1-85/006; Order No. PB85-193761, 181 pp. Avail. NTIS From: Gov. Rep. Announce. Index (U. S.) 1985, 85(16), Abstr. No. 535,786 (English) 1985.

GI



I

AB Fifteen pesticides being reviewed as part of the Environmental Protection Agency Substitute Chem. Program were examd. by SRI International by several in vitro test procedures, for the following: Reverse mutation in Salmonella typhimurium strains TA1535, TA1537, TA98, and TA100 and in Escherichia coli WP2, induction of mitotic recombination in the yeast Saccharomyces cerevisiae D3, relative toxicity in DNA repair-proficient and repair-deficient strains of **E. coli** (strains W3110 and p3478, resp.) and of Bacillus subtilis (strains H17 and M45, resp.), and, unscheduled DNA synthesis in human fibroblasts (WI-38 cells). None of the 15 pesticides demonstrated genetic activity in all 6 of the in vitro assays. Bioallethrin (I) [584-79-2] was the only pesticide that was mutagenic in the S. typhimurium reverse mutation assay. Manzate-D [12427-38-2] and manzate 200 [8018-01-7] increased both mitotic recombination in S. cerevisiae D3 and UDS in WI-38 cells. Dithane M 22 [12427-38-2], dithane M 45 [8018-01-7], Et chrysanthemate [97-41-6], and zineb [12122-67-7] increased mitotic recombination in S. cerevisiae D3. DL-cis/trans Chrysanthemic acid was genotoxic in the relative toxicity

assay, being more toxic to the repair-deficient [rec(-)] B. subtilis strain M45 than to the repair-proficient [rec(+)] strain H17.

=> s l20 and animal feed
L27 15 L20 AND ANIMAL FEED

=> dup remove l27
PROCESSING COMPLETED FOR L27
L28 14 DUP REMOVE L27 (1 DUPLICATE REMOVED)

=> d l28 1-14 cbib abs

L28 ANSWER 1 OF 14 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
2001:537269 Document No.: PREV200100537269. Post-weaning growth of cattle in northern New South Wales. 2. Growth pathways of steers. Dicker, R. W. (1); Ayres, J. F.; McPhee, M. J.; **Robinson, D. L.**; Turner, A. D.; Wolcott, M. L.; Kamphorst, P. G.; Harden, S.; Oddy, V. H.. (1) Agricultural Research and Advisory Station, NSW Agriculture, Glen Innes, NSW, 2370: ross.dicker@agric.nsw.gov.au Australia. Australian Journal of Experimental Agriculture, (2001) Vol. 41, No. 7, pp. 971-979. print. ISSN: 0816-1089. Language: English. Summary Language: English.

AB This paper describes the post-weaning growth of Bos taurus and Bos taurusXBos indicus-derived steers grazing temperate perennial pasture in northern New South Wales. These cattle were either autumn weaners from spring-calving herds in summer rainfall environments, or summer weaners from autumn-calving herds in winter rainfall environments. Autumn weaners were grown out on 3 pasture systems: (i) pasture only (P1), (ii) pasture supplemented in late winter-early spring with formulated pellets of high protein content (P2), or (iii) pasture supplemented with a nitrogen-fertilised forage crop (P3) to provide different growth pathways towards entry to the finishing phase. Over the 3-year study, seasonal liveweight gain on P1 varied between -0.21 and 1.05 kg/head.day; liveweight gain was generally low (about 0.5 kg/head.day) in winter and high (about 0.8 kg/head.day) in spring. Bos taurus autumn weaners achieved feedlot entry specifications for the domestic market (300 kg liveweight) in 6-8 weeks by the end of winter, and feedlot entry specifications for the export market (400 kg liveweight) in 17-27 weeks by the end of summer. For B. taurusXB. indicus-derived autumn weaners, the period to feedlot entry was 19 and 33 weeks for domestic and export feedlot entry specifications, respectively. Supplementary feeding generally increased post-weaning growth in late winter-early spring and reduced the period to feedlot entry for export steers. Summer weaners were grown out on pasture in P1, P2 or P3 pasture systems, met domestic feedlot entry specifications on arrival, but did not reach export feedlot entry specifications before the onset of winter imposed liveweight stasis. The most effective grow-out system was based on Bos taurus autumn weaners with supplementary feeding in winter-spring to overcome the limitations of the winter feed gap.

L28 ANSWER 2 OF 14 MEDLINE
85281636 Document Number: 85281636. PubMed ID: 4027733. Performance of laying hens as affected by split time and split composition dietary regiments using ground and unground cereals. **Robinson D.** BRITISH POULTRY SCIENCE, (1985 Jul) 26 (3) 299-309. Journal code: 15740290R. ISSN: 0007-1668. Pub. country: ENGLAND: United Kingdom. Language: English.

AB A factorial experiment was conducted to study the effects on the performance of White Leghorn X Australorp laying hens of diets based on unground cereal grains, small morning and large afternoon meals, and morning and afternoon meals of different composition. From 10 to 21 weeks of age the pullets' food intake was restricted, using either a diet in which the wheat fraction (600 g/kg) was unground or a fully ground diet of similar composition. In the laying period the birds received either a diet (U) in which the limestone was granulated and most of the cereal fraction

(wheat and oats or wheat and sorghum) was unground or a fully ground diet (G) of similar composition. Both laying diets were offered ad libitum (A), with 25% issued in the morning and 75% in the late afternoon (T) or as a protein concentrate (250 g/kg of total diet) in the morning and cereal/limestone fraction (750 g/kg) in the late afternoon (C). Rearing and laying performance were unaffected by rearing diet. Laying diet U resulted in a 5.2% increase in food intake and a 0.9 g increase in average egg weight compared with diet G. From 21 to 56 weeks of age, when the cereal/limestone fraction of the diet included oats (240 g/kg of total diet), diet U resulted in fewer (4.8/bird) eggs and a lower financial margin than diet G. From 56 to 80 weeks of age, when oats were replaced by sorghum, this trend was reversed (-3.5 eggs). Birds on diet C produced fewer (16.9) eggs of lower (1.5 g) average weight than birds on diet A, ate less (1.39 kg) food and had a lower financial margin.(ABSTRACT TRUNCATED AT 250 WORDS)

L28 ANSWER 3 OF 14 MEDLINE

83254110 Document Number: 83254110. PubMed ID: 6869981. Effects of dietary aluminum on magnesium status of cows. Kappel L C; Youngberg H; Ingraham R H; Hembry F G; **Robinson D L**; Cherney J H. AMERICAN JOURNAL OF VETERINARY RESEARCH, (1983 May) 44 (5) 770-3. Journal code: 0375011. ISSN: 0002-9645. Pub. country: United States. Language: English.

L28 ANSWER 4 OF 14 MEDLINE

77134665 Document Number: 77134665. PubMed ID: 849400. The effect of feeding magnesium-enriched diets on the quality of the albumen of stored eggs. Monsey J B; **Robinson D S**; Miller W S; Ellis M. BRITISH JOURNAL OF NUTRITION, (1977 Jan) 37 (1) 35-44. Journal code: 0372547. ISSN: 0007-1145. Pub. country: ENGLAND: United Kingdom. Language: English.

AB 1. Pullets were given from 1-d-old diets containing 1-6, 4-1, 8-1 and 12-0 g Mg/kg. Only small effects of these diets on live weight, food consumption, egg number, egg weights or egg-shell thickness were observed except at the highest level (12-0 Mg/kg) which caused diarrhoea and an appreciable lowering of the live weight of growing pullets. A further group was given from point-of-lay a diet containing 9-3 g Mg/kg. 2. Eggs laid on 3 consecutive days from each of eighteen hens were collected at intervals of 3 weeks until the birds were 68-5 weeks old. Eggs laid on the 3rd day were used to determine the initial proportion of thick egg-white present and also the concentration of Mg, Ca, Na and K in the thick egg-white. Eggs laid on the 1st and 2nd days were stored at 20 degrees for 20 d to establish the proportion of thick egg-white remaining after storage. 3. With the unsupplemented diet the proportion of residual thick egg-white after storage of eggs for 20 d at 20 degrees was 306, 161 and 305 mg/g total egg-white when the hens were 26-5, 53-5 and 68-5 weeks of age respectively. When the diet containing 9-3 g Mg/kg was given, the proportion of thick egg-white after storage remained approximately 400 mg/g throughout the period of the trial. 4. The mean Mg concentration in the thick egg-white of eggs laid by hens given unsupplemented diets was 5-77 mM. The addition of extra Mg to the diet increased the content of Mg in the thick egg-white, for example when the diet contained 9-3 g Mg/kg the mean concentration rose to 7-69 mM.

L28 ANSWER 5 OF 14 MEDLINE

75189082 Document Number: 75189082. PubMed ID: 1141063. Effects of dietary restriction and fasting on the body composition of normal and genetically obese mice. **Robinson D W**; Hodgson D; Bradford G E; Robb J; Peterson D W. JOURNAL OF ANIMAL SCIENCE, (1975 Jun) 40 (6) 1058-62. Journal code: 8003002. ISSN: 0021-8812. Pub. country: United States. Language: English.

L28 ANSWER 6 OF 14 MEDLINE

76115728 Document Number: 76115728. PubMed ID: 1212608. Food intake regulation in pigs. V. The influence of dietary amino acid pattern on free

choice selection in pigs. **Robinson D W**. BRITISH VETERINARY JOURNAL, (1975 Nov-Dec) 131 (6) 707-15. Journal code: 0372554. ISSN: 0007-1935. Pub. country: ENGLAND: United Kingdom. Language: English.

L28 ANSWER 7 OF 14 MEDLINE
76063580 Document Number: 76063580. PubMed ID: 1192171. Food intake regulation in pigs. IV. The influence of dietary threonine imbalance on food intake, dietary choice and plasma acid patterns. **Robinson D W** . BRITISH VETERINARY JOURNAL, (1975 Sep-Oct) 131 (5) 595-600. Journal code: 0372554. ISSN: 0007-1935. Pub. country: ENGLAND: United Kingdom. Language: English.

L28 ANSWER 8 OF 14 MEDLINE
75077378 Document Number: 75077378. PubMed ID: 4613728. The current status of knowledge on the nutrition of equines. **Robinson D W;** Slade L M. JOURNAL OF ANIMAL SCIENCE, (1974 Dec) 39 (6) 1045-66. Ref: 279. Journal code: 8003002. ISSN: 0021-8812. Pub. country: United States. Language: English.

L28 ANSWER 9 OF 14 MEDLINE
75091573 Document Number: 75091573. PubMed ID: 4447871. Food intake regulation in pigs. III. Voluntary food selection between protein-free and protein-rich diets. **Robinson D W**. BRITISH VETERINARY JOURNAL, (1974 Nov-Dec) 130 (6) 522-7. Journal code: 0372554. ISSN: 0007-1935. Pub. country: ENGLAND: United Kingdom. Language: English.

L28 ANSWER 10 OF 14 MEDLINE DUPLICATE 1
72069624 Document Number: 72069624. PubMed ID: 5130005. High lysine corn--what lies ahead?. **Robinson D;** Frost H C. JOURNAL OF THE AMERICAN OIL CHEMISTS SOCIETY, (1971 Aug) 48 (8) 407-11. Journal code: 7505574. ISSN: 0003-021X. Pub. country: United States. Language: English.

L28 ANSWER 11 OF 14 MEDLINE
70282451 Document Number: 70282451. PubMed ID: 5455690. Hereditary muscular hypertrophy in the bovine: metabolic response to nutritional stress. Holmes J H; **Robinson D W**. JOURNAL OF ANIMAL SCIENCE, (1970 Oct) 31 (4) 776-80. Journal code: 8003002. ISSN: 0021-8812. Pub. country: United States. Language: English.

L28 ANSWER 12 OF 14 MEDLINE
70205325 Document Number: 70205325. PubMed ID: 5420308. Nitrogen metabolism in nonruminant herbivores. II. Comparative aspects of protein digestion. Slade L M; **Robinson D W**. JOURNAL OF ANIMAL SCIENCE, (1970 May) 30 (5) 761-3. Journal code: 8003002. ISSN: 0021-8812. Pub. country: United States. Language: English.

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